KP-46XBR25/53XBR25/61XBR28

RM-Y114A

SERVICE MANUAL

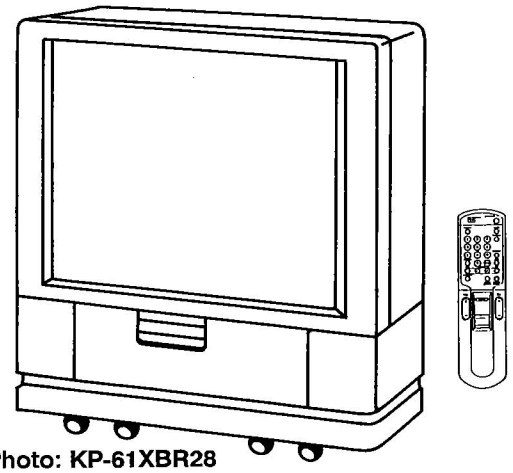

Photo: KP-61XBR28

US Model

KP-46XBR25
Chassis No. SCC-F19J-A
KP-53XBR25
Chassis No. SCC-F19L-A
KP-61XBR28
Chassis No. SCC-F19Q-A

Canadian Model

KP-53XBR25
Chassis No. SCC-F23E-A

AP CHASSIS

MODELS OF THE SAME SERIES	
KP-46XBR25/53XBR25/61XBR28	KP-41EXR96
KP-46V15/46V16	KPR-41EXR95
KP-53V15/53V16/61V15	KPR-46XBR15/53XBR15

SPECIFICATIONS

Structure	Screen and projector, rear projection type
Projection system	3 picture tubes, 3 lenses, horizontal in-line system
Picture tube	7 inch high-brightness monochrome tubes (5.5 raster size), with optical coupling and liquid cooling system
Projection lenses	High performance, larger-diameter hybrid lens F 1.0
Screen material	Plastic lenticular, Plastic fresnel
Projected picture size (in inches, measured diagonally)	46 (KP-46XBR25) 53 (KP-53XBR25) 61 (KP-61XBR28)
Screen brightness (cd/m²)	1,600 (KP-46XBR25) 1,250 (KP-53XBR25) 900 (KP-61XBR28)
Television system	American TV standards
Channel coverage	VHF: 2-13 UHF: 14-69 CABLE TV: 1-125
Antenna	75- ohm external antenna
Input jacks	terminal for VHF/UHF VIDEO IN 1, 2 and 3 S VIDEO IN (4-pin mini DIN) Y: 1 Vp-p, 75-ohms unbalanced, sync negative C: 0.286 Vp-p (Burst signal) 75-ohms Video (phono jacks): 1 Vp-p, 75-ohms unbalanced, sync negative Audio (phono jacks): 500 mVrms (100% modulation) Impedance: 47 kilo-ohms

- Continued on next page -

MICROFILM

COLOR REAR VIDEO PROJECTOR

SONY®

Output jacks MONITOR OUT
S VIDEO MONITOR OUT
(4-pin mini DIN)
Y:1 Vp-p, 75-ohms
unbalanced, sync negative
Video (phono jacks):1Vp-p, 75-ohms
unbalanced, sync negative
Audio (phono jacks):500mVrms
(100% modulation)
Impedance:10 kilo-ohms
AUDIO (VAR) OUT
(phono jacks)
More than 900mVrms (100% modulation)
at the maximum volume setting (variable)
Impedance:5kilo-ohms
AUDIO OUT
(phono jacks)
900mVrms (100% modulation)
Impedance:5kilo-ohms

Speaker	KP-46XBR25/53XBR25 Woofer 120 mm ($4_{3/4}$ inches) diameter Tweeter 25 mm (1 inches) diameter KP-61XBR28 Woofer 160 mm ($6_{1/2}$inches) diameter Tweeter 50 mm (2inches) diameter
Speaker output	20W×2 (FRONT) 10W×2 (REAR)
CENTER SPEAKER input	16Ω NORM. 30W MAX 50W
Power requirements	120 V AC, 60 Hz
Power consumption	350W (max.) 280W (avg.) 7W (standby mode)
Dimensions (w/h/d)	1,103.9×1,289.1×511.8 mm ($40_{1/2}$×$50_{3/4}$×$20_{1/4}$ inches) (KP-46XBR25) 1,237.9×1,338.1×614.6 mm ($48_{3/4}$×$52_{3/4}$×$24_{1/4}$ inches) (KP-53XBR25) 1,560×1,532×780 mm ($61_{7/16}$×$60_{5/16}$×$30_{11/16}$ inches) (KP-61XBR28)
Weight	91 kg (200 lb 10 oz) (KP-46XBR25) 94 kg (207 lb 4 oz) (KP-53XBR25) 170 kg (374 lb 13 oz) (KP-61XBR28)
Supplied accessories	Remote Commander RM-Y114A (1) with 2 size AA (R6) EVEREADY batteries
Optional accessories	U/V mixer EAC-66 Connecting cable RK-74A VMC-810S/820S YC-15V/30V VCR Tray SU-PJT1 (except for KP-61XBR28)

Design and specifications are subject to change without notice.

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ Á L'ALIMENTATION SECTEUR.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

ATTENTION AUX COMPOSANTS RELATIFS ÁLA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SAFETY CHECK-OUT (US Model Only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any).
   Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

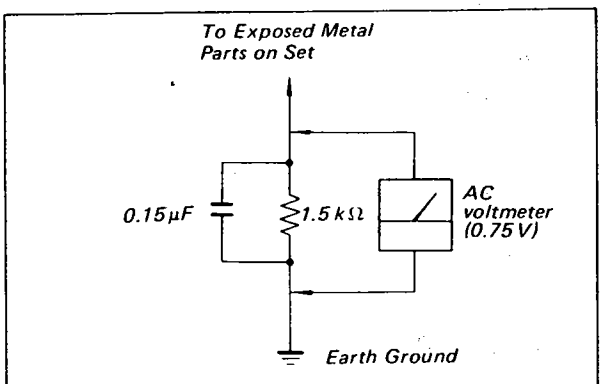

Fig. A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60–100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

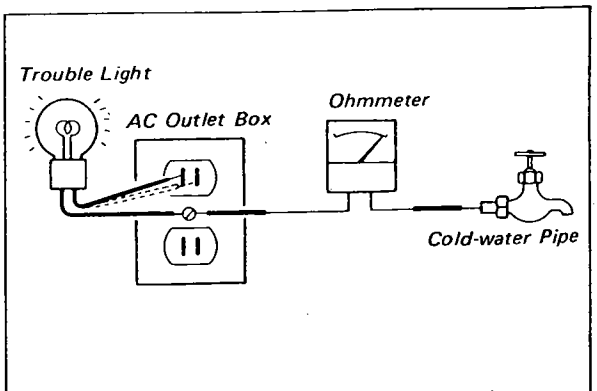

Fig. B. Checking for earth ground.

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The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remein as in the manual.

SECTION 1
GENERAL

1-1. UNPACKING AND VIEWING AREA

1 Carefully follow the instructions on the outside of the packing carton to unpack the projection TV.

Notes
- The supplied accessories are packed in the bottom of the carton. Be sure not to throw them away.
- Keep the original carton and packing materials to safely transport the projection TV in the future.

2 Check to make sure that the following is included:

Universal Remote Commander RM-Y114A (1)
with 2 size AA (R6) EVEREADY batteries

If the Remote Commander is missing, contact your dealer.

3 Place the projection TV in a cool, dry place where the ventilation openings at the sides are not blocked.

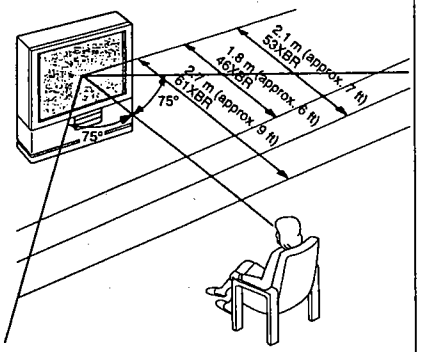
4 Plug the projection TV power cord into an AC 120 volt power outlet.

For further precautions, see p. 2.

Optimum viewing area

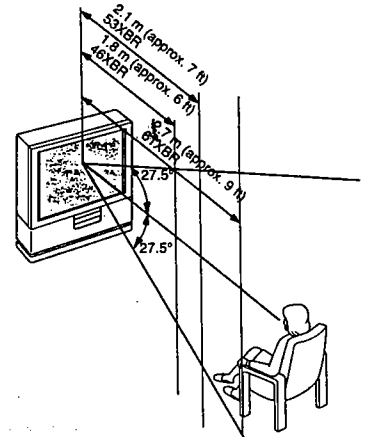
For the best picture quality, try to position the projection TV so that you can view the screen from within the areas shown below.

Horizontal viewing area



Optimum viewing position

Vertical viewing area

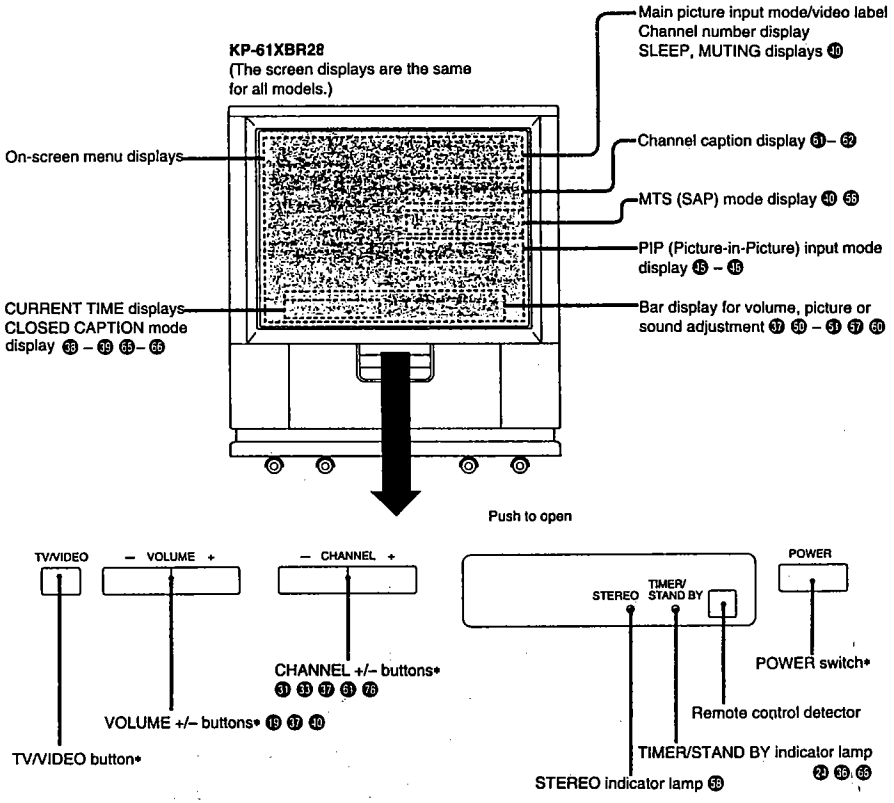


Optimum viewing position

1-2. LOCATING CONTROLS AND CONNECTORS

For details, see the pages indicated by the numbered black circles ●.

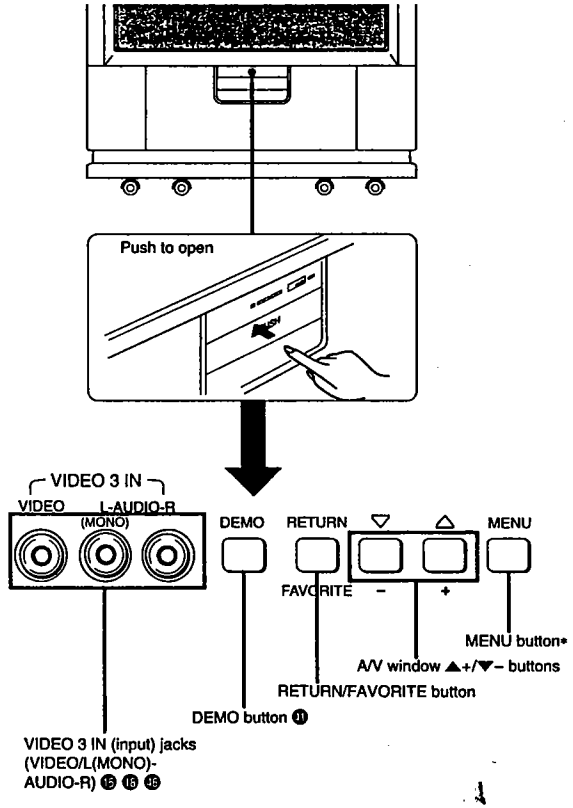
Front


KP-61XBR28
(The screen displays are the same for all models.)
Main picture input mode/video label
Channel number display
SLEEP, MUTING displays ⑩
On-screen menu displays
Channel caption display ⑤①– ⑤②
MTS (SAP) mode display ⑩ ⑤⑤
PIP (Picture-in-Picture) input mode display ④⑤ – ④⑧
CURRENT TIME displays
CLOSED CAPTION mode display ⑱ – ⑲ ⑥⑤– ⑥⑥
Bar display for volume, picture or sound adjustment ⑰ ⑲ – ⑤① ⑤⑦ ⑥⑩
Push to open
TV/VIDEO
– VOLUME +
– CHANNEL +
POWER
STEREO
TIMER/ STAND BY
CHANNEL +/– buttons• ③① ③③ ③⑦ ⑤① ⑦⑥
VOLUME +/– buttons• ⑲ ③⑦ ④⑩
POWER switch•
Remote control detector
TV/VIDEO button•
TIMER/STAND BY indicator lamp ㉓ ㊱ ⑥⑤
STEREO indicator lamp ⑤⑧

• Buttons with the same function are also located on the Remote Commander (p. 10).

Front Inner panel

KP-61XBR28



* Buttons with the same function are also located on the Remote Commander (p. 10).

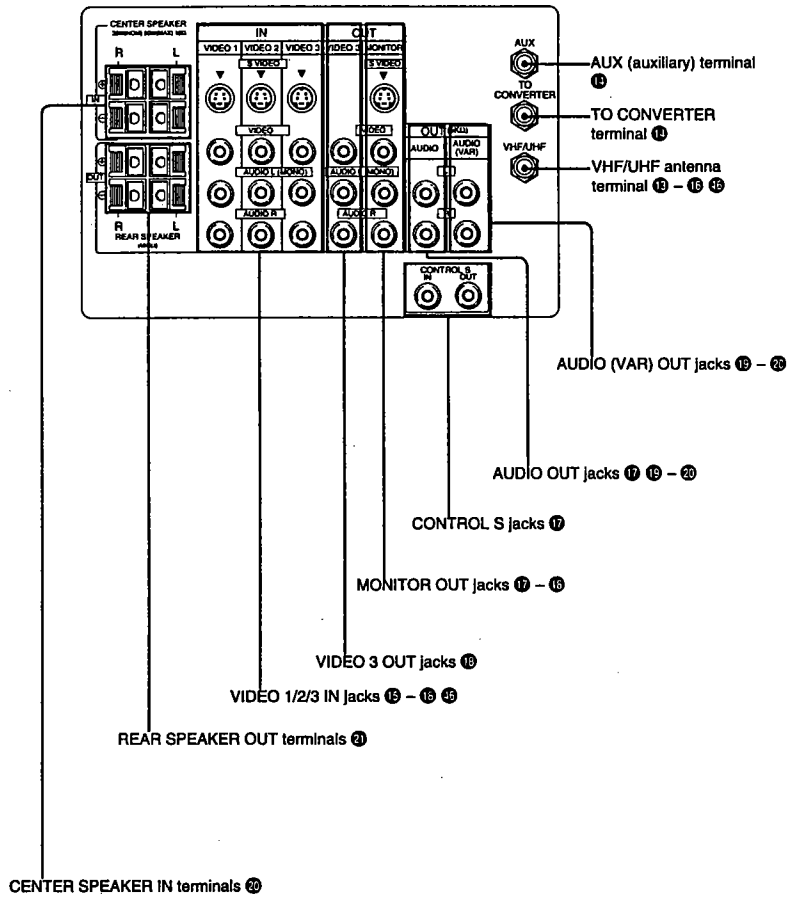
Note

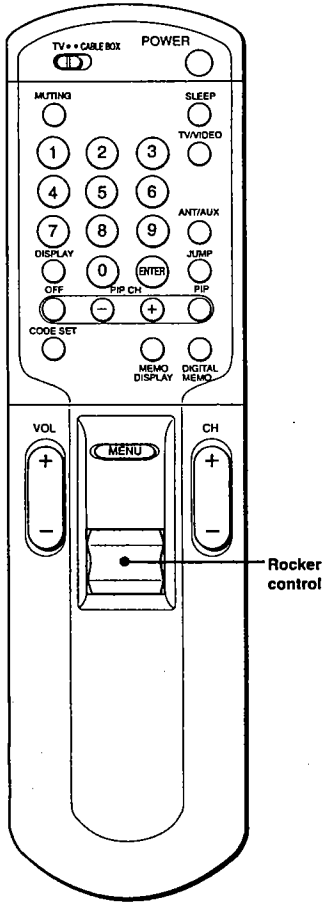
The instructions in this manual are based for the most part on operating the projection TV with the Remote Commander. You can also use the buttons on the projection TV that have the same function.

The following are controls that are of different types, but have exactly the same function.

Projection TV	A/V window ▲+/▼– buttons	RETURN button
Remote Commander	Rocker control (press up or down)	Rocker control (click)

Rear


AUX (auxiliary) terminal ⓭
TO CONVERTER terminal ⓬
VHF/UHF antenna terminal ⓭ – ⓰ ⓲
AUDIO (VAR) OUT jacks ⓳ – ⓴
AUDIO OUT jacks ⓱ ⓳ – ⓴
CONTROL S jacks ⓱
MONITOR OUT jacks ⓱ – ⓰
VIDEO 3 OUT jacks ⓲
VIDEO 1/2/3 IN jacks ⓯ – ⓲ ⓯
REAR SPEAKER OUT terminals ㉑
CENTER SPEAKER IN terminals ㉒



Navigating through the menus

To display the main menu
Press MENU.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

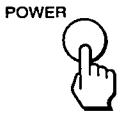
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

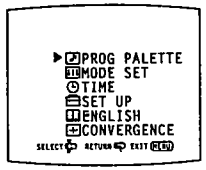
Changing the menu language

The menu language is factory-set to ENGLISH. Follow these instructions to change the menu language to Spanish or French, or back to English.

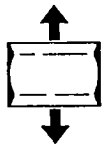
1 Press POWER to turn on the projection TV.
TIMER/STAND BY indicator blinks until the picture appears.

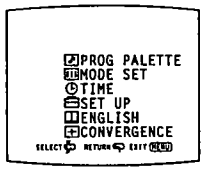


2 Press MENU.
The main menu appears.

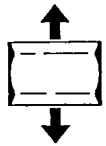


3 Press the rocker control up or down until the cursor points to "ENGLISH."
Then click the rocker control.
The language display turns red.



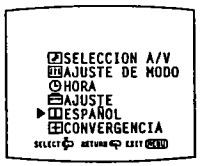


4 Press the rocker control up or down to select the language.
Each time you press the rocker control up or down, the "ESPAÑOL," "FRANÇAIS" and "ENGLISH" menus appear.



Note
Certain parts of the "ESPAÑOL" and "FRANCAIS" menus remain in English.

5 Click the rocker control.
The language is selected.

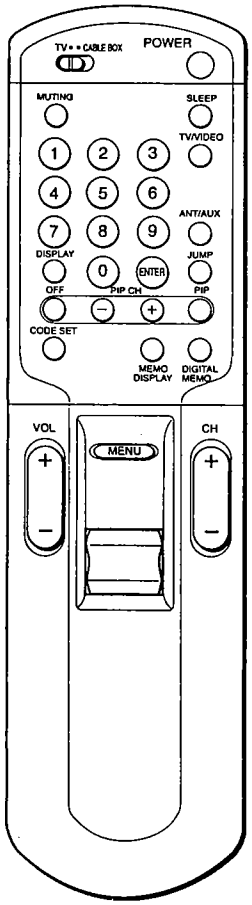


Spanish menu

To return to the normal screen.
Press MENU on the Remote Commander.

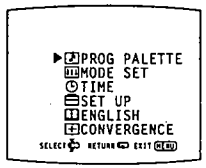
Notes concerning menus
- During PIP (Picture-In-Picture) mode, the on-screen menus may overlap the window picture.
- The menus disappear automatically, if you do not press a button within 90 seconds.

1-4. ADJUSTING COLOR REGISTRATION (CONVERGENCE)

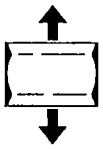


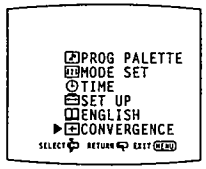
In a projection TV, the projection tube image appears on the screen in three color layers (red, green and blue). If these layers are not in proper registration, the color is poor and the picture blurs. To correct this, perform the CONVERGENCE adjustment.

1 Press MENU.
The main menu appears.



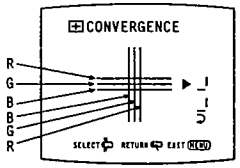
2 Press the rocker control up or down until the cursor points to "CONVERGENCE."



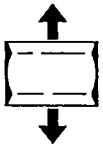


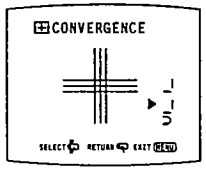
3 Click the rocker control.
The CONVERGENCE screen and the colored adjustment lines appear.

R = Red
G = Green
B = Blue



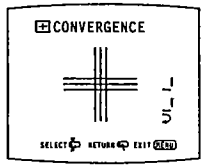
4 Press the rocker control up or down until the cursor points to the symbol representing the line you want to adjust (see the key below).



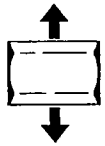


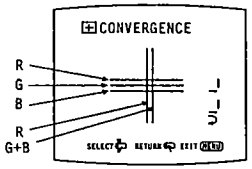
Adjustment line symbols key
- | (red vertical: left/right adjustment)
- — (red horizontal: up/down adjustment)
- | (blue vertical: left/right adjustment)
- — (blue horizontal: up/down adjustment)

5 Click the rocker control.
The adjustment line is selected.



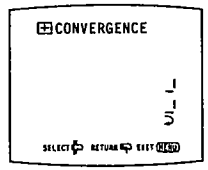
6 Press the rocker control up or down until the line converges with the center green line. Then click the rocker control.





To move up To move right	Press the rocker control up.
To move down To move left	Press the rocker control down.

7 Repeat steps 4 – 6 to adjust the other lines, until all the lines have overlapped to form a white cross.

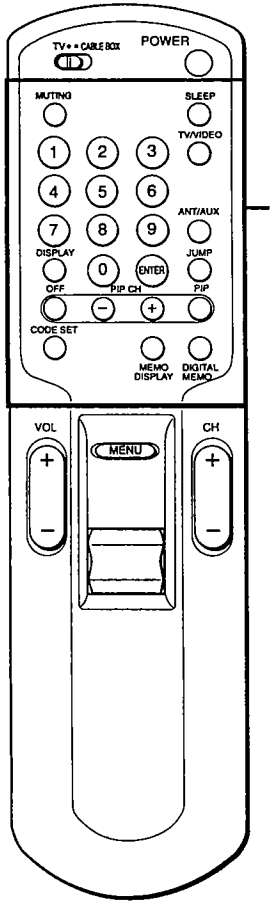


To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU." Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

1-5. SETTING CABLE ON OR OFF

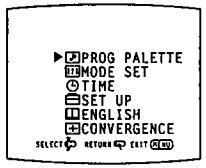


Outer panel

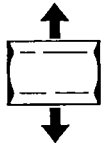
If you have cable connected to the projection TV, follow the steps below to set the cable connection on or off. Set CABLE OFF to preset or watch VHF or UHF channels, and set CABLE ON to preset or watch cable TV channels.

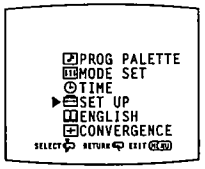
Note
If the projection TV is in video mode, the "CABLE" display is shaded and cannot be selected. Press TV/VIDEO to change to TV mode.

1 Press MENU.
The main menu appears.

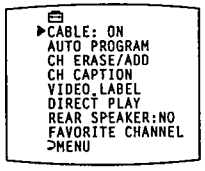


2 Press the rocker control up or down until the cursor points to "SET UP."

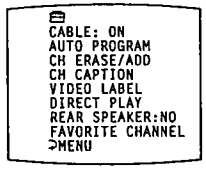




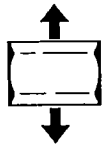
3 Click the rocker control.
The set up menu appears, and the cursor points to "CABLE."

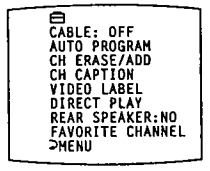


4 Click the rocker control again.
The mode display turns red.

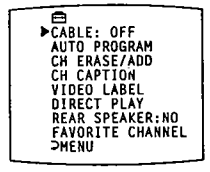


5 Press the rocker control up or down to select "ON" or "OFF."





6 Click the rocker control.
The setting is complete.



To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

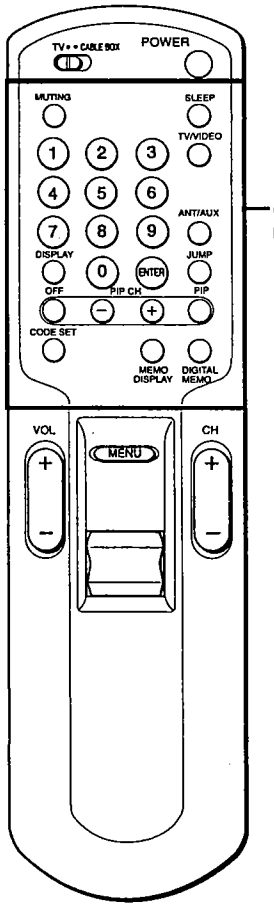
Cable TV channel chart•
Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

Number on this projection TV	Corresponding CATV channel
1	A-8
5	A-7
6	A-6
14	A
15	B
16	C
17	D
18	E
19	F
20	G
21	H
22	I
23	J
24	K
25	L
26	M
27	N
28	O
29	P
30	Q
31	R
32	S
33	T
34	U
35	V
36	W
37	W+1
38	W+2
39	W+3
⋮	⋮
93	W+57
94	W+58
95	A-5
96	A-4
97	A-3
98	A-2
99	A-1
100	W+59
101	W+60
102	W+61
⋮	⋮
123	W+82
124	W+83
125	W+84

Check with your local cable TV company for more complete information on the available channels.
- The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

1-6. PRESETTING TV CHANNELS

By presetting TV channels to the projection TV, you can select channels by pressing CH (CHANNEL) +/–.
(You can select VHF channels 2 – 13 without presetting.)



Outer panel

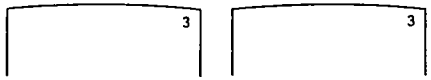
Presetting all receivable channels automatically

Follow these instructions to preset all the receivable VHF, UHF or cable TV channels to the projection TV.

Notes

- If the projection TV is in video mode, the "AUTO PROGRAM" display is shaded and cannot be selected. Press TV/VIDEO to change to TV mode.
- Perform auto programming during the day rather than late at night, when some channels may not be broadcasting.

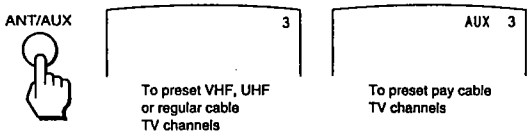
1 Set the cable connection on or off (pp. 28 – 29) to select the type of channel you want to preset, VHF/UHF or cable TV.



To preset VHF or UHF channels

To preset cable TV channels

Press ANT/AUX to select the type of channel you want to preset, VHF/UHF/ regular cable TV, or pay cable TV connected to the AUX (auxiliary) terminal.

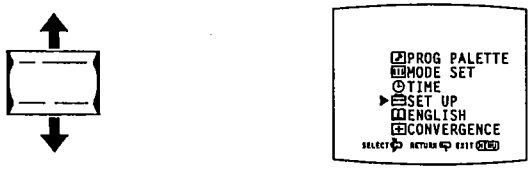


To preset VHF, UHF or regular cable TV channels

To preset pay cable TV channels

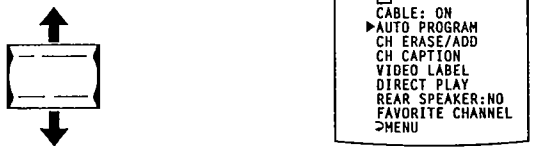
2 Press MENU.
The main menu appears.

3 Press the rocker control up or down until the cursor points to "SET UP."



4 Click the rocker control.
The set up menu appears.

5 Press the rocker control up or down until the cursor points to "AUTO PROGRAM."



6 Click the rocker control.

"AUTO PROGRAM" appears on the screen and receivable channels (other than the channels already preset) are preset in numerical sequence. The channels previously preset will not remain in the projection TV's memory.
When no more channels are found, auto programming stops and the screen returns automatically to the set up menu.

7 Press CH +/– to check or view the preset channels.

Receivable channels for this projection TV
VHF: 2 – 13
UHF: 14 – 69
Cable: 1 – 125

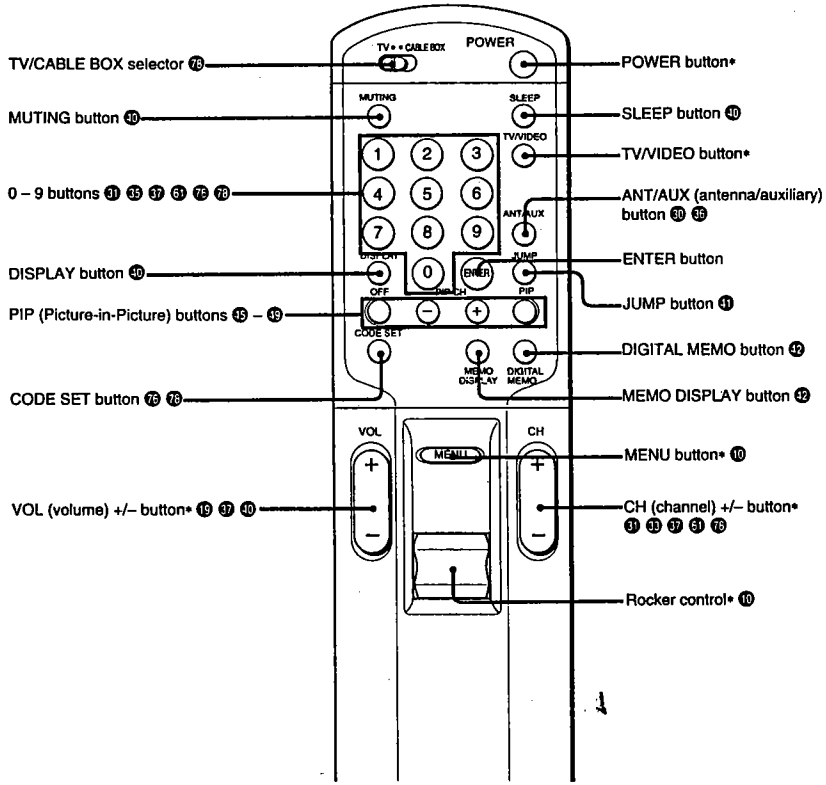
To select TV channels without presetting
Press the 0 – 9 buttons and ENTER.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

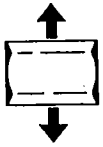
Remote Commander RM-Y114A (Outer panel controls)



Using the rocker control

Use the rocker control to make on-screen menu selections (see p. 22).

Press the control up or down to make a selection.



Click the control to execute the selection.

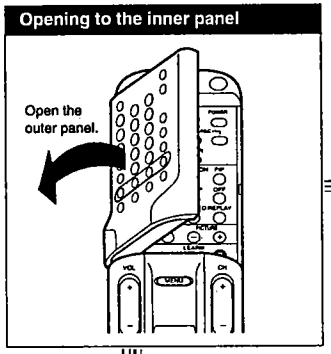
* Buttons with the same function are also located on the projection TV (pp. 7 – 8).

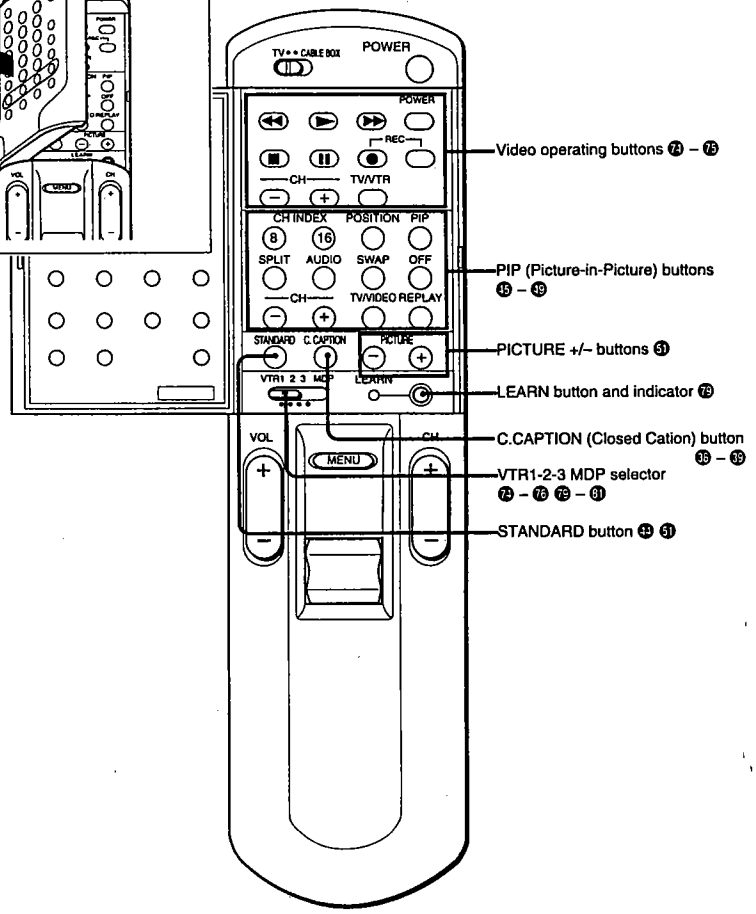
Note

If the TV/CABLE BOX selector is set to CABLE BOX, the Remote Commander is able to control a connected cable box, not the projection TV (p. 74). Set the selector to TV to control the projection TV with the Remote Commander.

Remote Commander RM-Y114A (Inner panel controls)

Opening to the inner panel

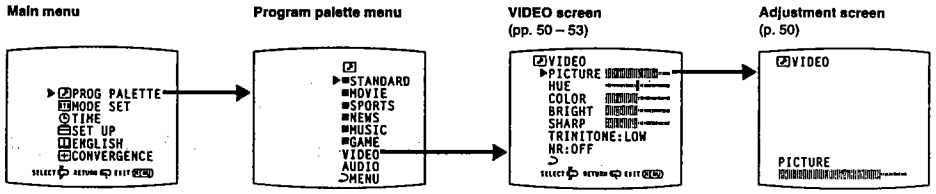


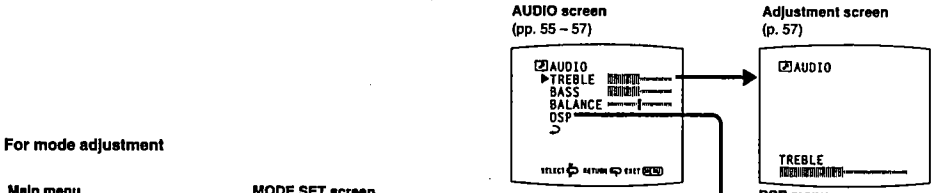


1-3. USING THE ON-SCREEN MENUS

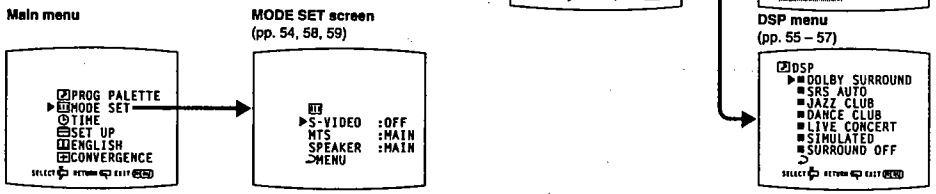
The following flow chart shows the different levels of on-screen menus that you can use to make various adjustments and settings. See the indicated pages for instructions on using each feature.

For picture and sound quality adjustment

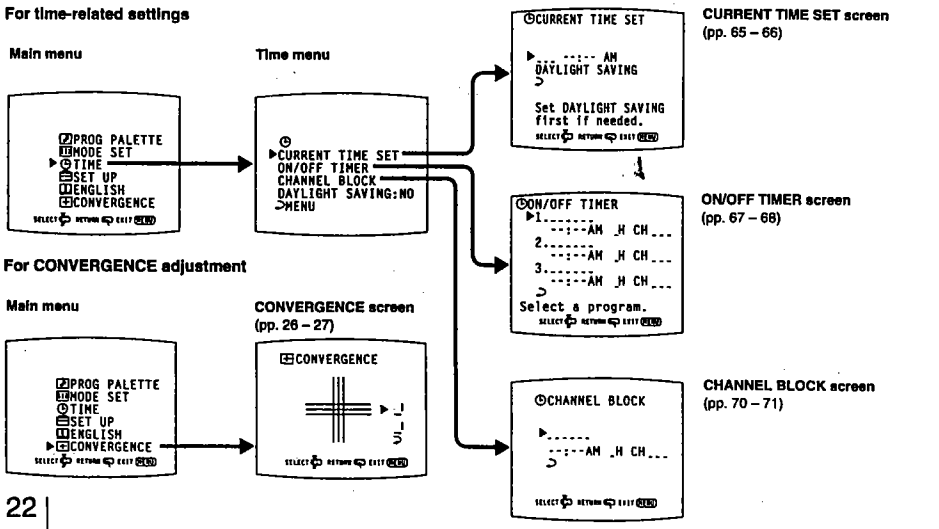




For mode adjustment

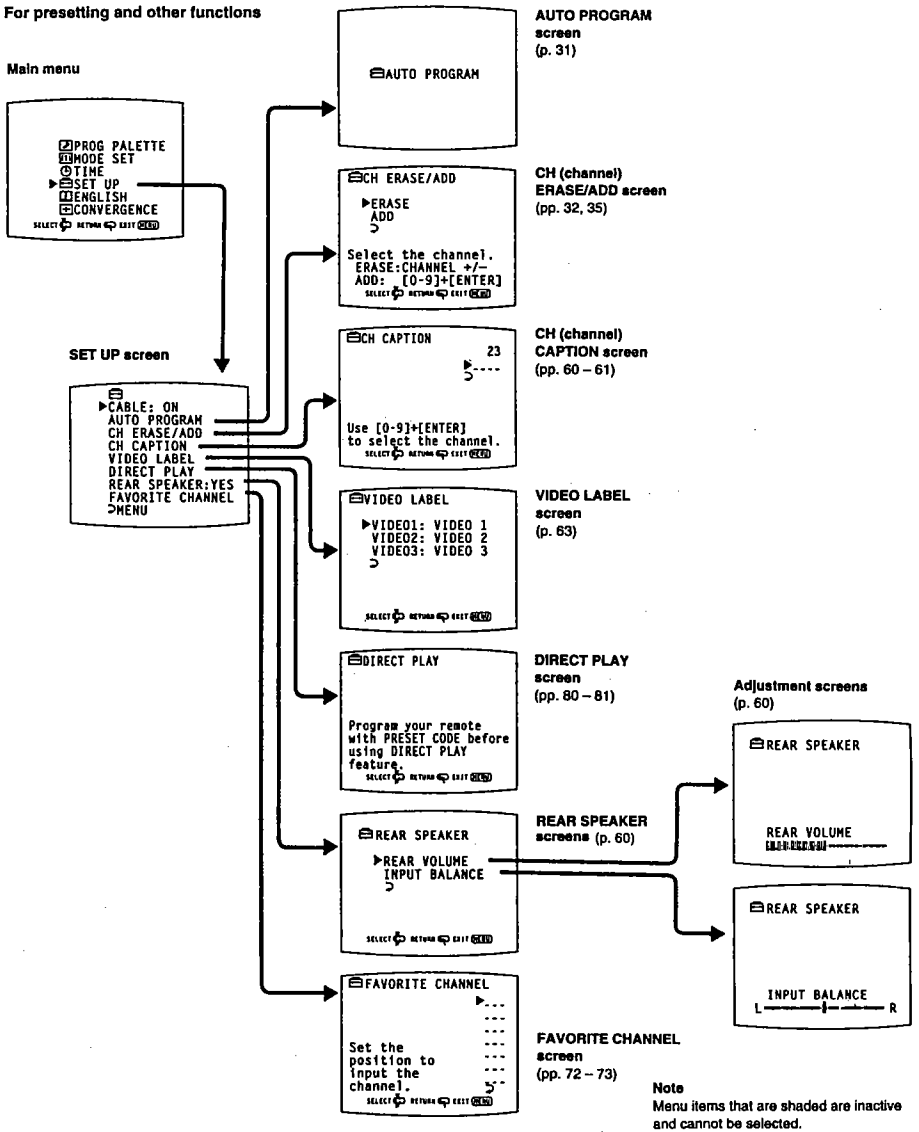


For time-related settings

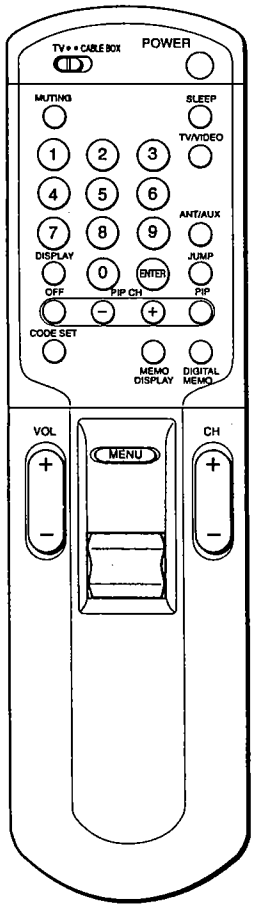


For CONVERGENCE adjustment

For presetting and other functions



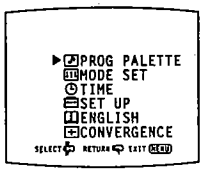
Note
Menu items that are shaded are inactive and cannot be selected.



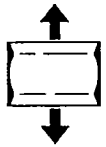
Erasing TV channels

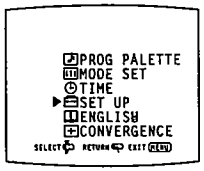
Follow these instructions to erase unnecessary TV channels, so that when you press CH +/–, the channel(s) are skipped.

1 Press MENU.
The main menu appears.

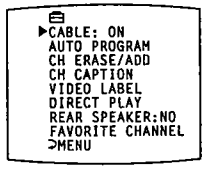


2 Press the rocker control up or down until the cursor points to "SET UP."

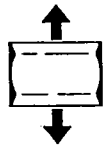


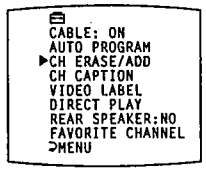


3 Click the rocker control.
The set up menu appears.

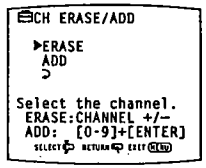


4 Press the rocker control up or down until the cursor points to "CH ERASE/ADD."

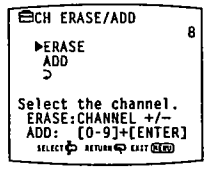




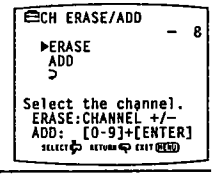
5 Click the rocker control.
The CH ERASE/ADD screen appears, and the cursor points to "ERASE."



6 Press CH +/– to select the channel you want to erase.
The channel display appears.



7 Click the rocker control.
A "–" sign appears in front of the channel number display, indicating that the channel is erased; then the CH ERASE/ADD screen automatically reappears.



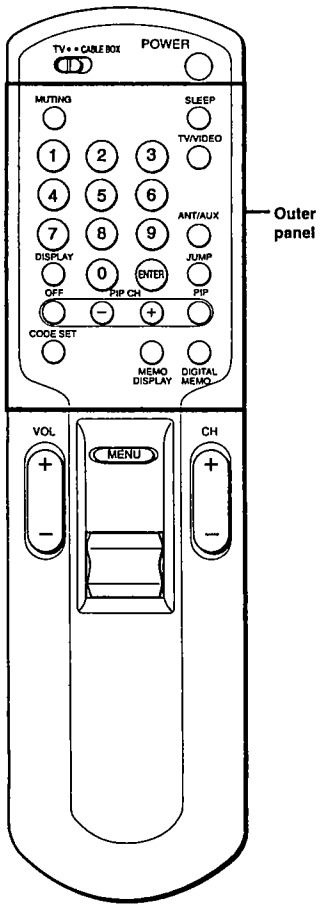
To erase another channel
Repeat steps 6 – 7.

To return to the previous menu
Press the rocker control up or down until the cursor points to "⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

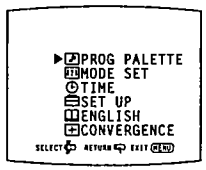
Note
If you erase a VHF or UHF channel, the same number cable TV channel is also erased (and vice versa).



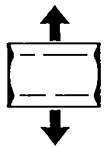
Adding TV channels

Follow these instructions to add TV channels one by one to the selection memory, or to replace a TV channel you previously erased (pp. 32 – 33).

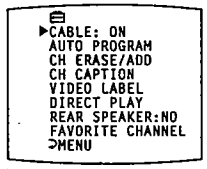
1 Press MENU.
The main menu appears.



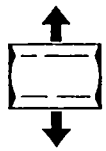
2 Press the rocker control up or down until the cursor points to "SET UP."

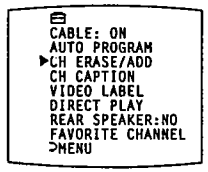


3 Click the rocker control.
The set up menu appears.

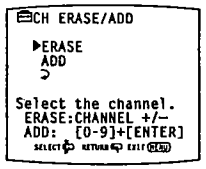


4 Press the rocker control up or down until the cursor points to "CH ERASE/ADD."

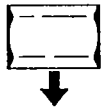


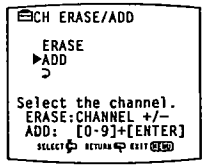


5 Click the rocker control.
The CH ERASE/ADD screen appears.

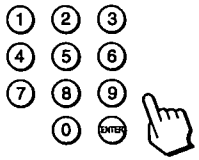


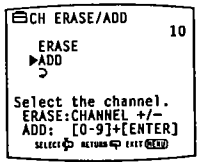
6 Press the rocker control down until the cursor points to "ADD."



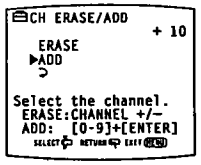


7 Press 0 – 9 and ENTER on the Remote Commander to select the channel you want to add.
The channel display appears.





8 Click the rocker control.
A "+" sign appears in front of the channel number display, indicating that the channel is added; then the CH ERASE/ADD screen automatically reappears.



To add another channel
Repeat steps 7 – 8.

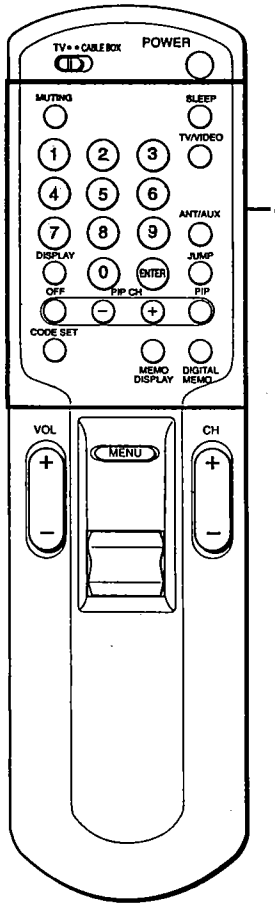
To return to the previous menu
Press the rocker control up or down until the cursor points to " ↩ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

Note
If you add a VHF or UHF channel, the same number cable TV channel is also added (and vice versa).

1-7. WATCHING TV PROGRAMS



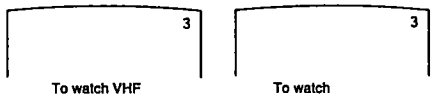
Outer panel

Make sure that the TV/CABLE BOX selector on the Remote Commander is set to TV, in order to control the projection TV with the Remote Commander.

1 Press POWER to turn on the projection TV.
TIMER/STAND BY indicator blinks until the picture appears.

POWER

2 Set the cable connection on or off (pp. 28 – 29) to select the type of channel you want to watch, VHF/UHF or cable TV.

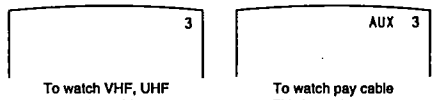


To watch VHF or UHF channels

To watch cable TV channels

Press ANT/AUX to select the type of channel you want to watch, VHF/UHF/ regular cable TV, or pay cable TV connected to the AUX (auxiliary) terminal.

ANT/AUX



To watch VHF, UHF or regular cable TV channels

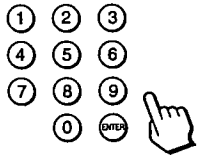
To watch pay cable TV channels

3 Select a channel in one of the following two ways:

To scan the preset channels in numerical sequence, press CH +/–.

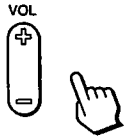
CH

To select a channel directly, press 0 – 9 and then ENTER.
For example, to select channel 10, press 1, 0 and ENTER.



4 Press VOL +/– to adjust the volume.

VOL



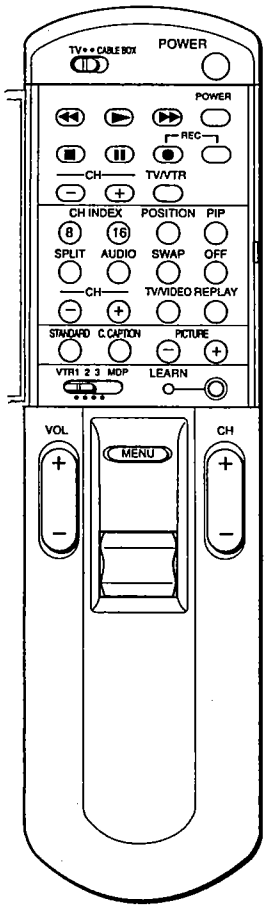
Press + to increase the volume.
Press – to decrease the volume.

If VIDEO 1, VIDEO 2 or VIDEO 3 appears on the screen
Press TV/VIDEO until a TV channel number appears.

To select channels more easily
Set FAVORITE CHANNEL (pp. 72 – 73).

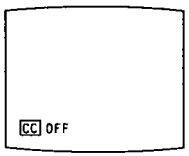
To turn off the projection TV
Press POWER.

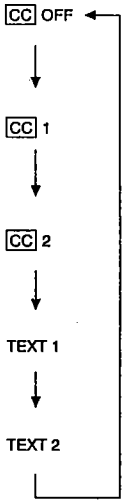
1-8. USING CLOSED CAPTION



1 Press C.CAPTION.

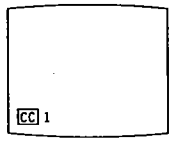
The closed caption mode appears. CC1, CC2, TEXT1, TEXT2 or CC OFF appears in sequence each time you press C.CAPTION.



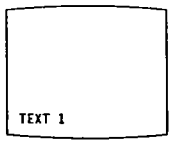


2 Press C.CAPTION repeatedly.

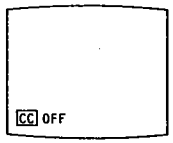
Select CC1 or CC2 to view Captions.
A Caption is a printed version of the dialogue or sound effects of a program. (The mode should be set to CC1 for most programs.)



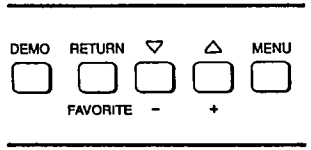
Select TEXT1 or TEXT2 to view Text.
Text is information that is presented using the half to full television screen. It is usually not related to the program.



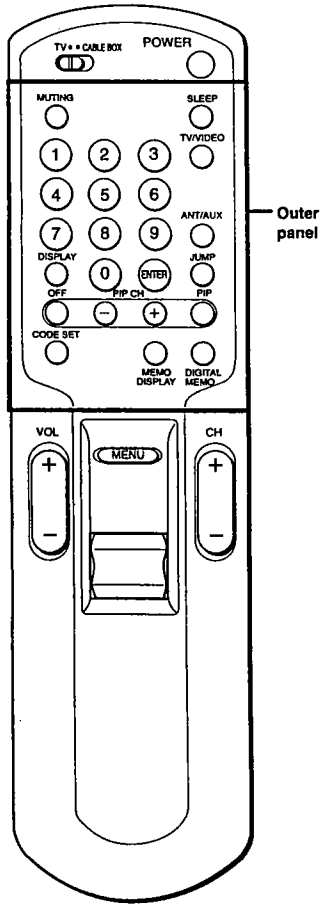
Select CC OFF if you don't want to view Closed Caption nor Text.



1-9. USING CONVENIENT FEATURES



Front inner panel



Outer panel

Muting the sound — MUTING

Press MUTING.
"MUTING" appears on the screen.

MUTING

To restore the sound
Press MUTING again, or press VOL +.

Keeping the displays on-screen — DISPLAY

Press DISPLAY.
All the existing displays appear: channel number, channel caption (if set), MTS mode ("SAP" only), window picture input mode, and the current time ("AM" or "PM" disappears after about three seconds).

DISPLAY

To turn off the displays
Press DISPLAY again.

Setting the sleep timer — SLEEP

The sleep timer turns off the projection TV automatically after the amount of time you select.

Press SLEEP.
Each time you press SLEEP, the time increments "30," "60," "90" and "OFF" mode appear in sequence.

SLEEP

SLEEP 30
SLEEP 60
SLEEP 90
SLEEP OFF

A red "SLEEP" display appears about one minute before the projection TV goes off.

To cancel the setting.
Press SLEEP until OFF mode appears.
A green "SLEEP OFF" display appears for about three seconds.
OR
Turn the projection TV off.
The sleep timer setting is cancelled.

Switching quickly between two channels — JUMP

Use this function to keep track of two programs alternately.

JUMP

To recall the channel you were watching previously
Press JUMP.

To switch back to the first channel
Press JUMP again.

Note
The JUMP function also changes the mode to ANT (antenna) or AUX (auxiliary), depending on the mode of the channel you were watching previously.

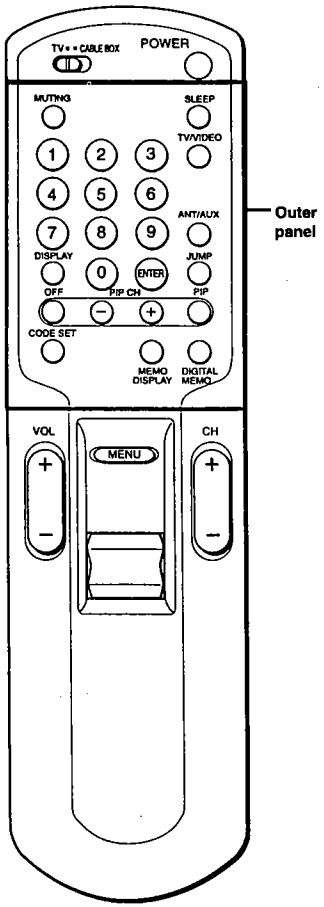
Previewing the features — DEMO

Press DEMO (front inner panel).
Functions and menus are displayed one by one.

DEMO

To restart DEMO from the beginning
Press DEMO again.

To stop DEMO
Press any button.



Outer panel

Storing an image in memory – DIGITAL MEMO

Use this feature to store and recall a recipe from a cooking program, a displayed address or phone number and so on.

1 Press DIGITAL MEMO.
The displayed image is stored in memory, and the image remains still on the screen.

DIGITAL MEMO

2 Press MEMO DISPLAY.
The projection TV returns to normal viewing mode.

MEMO DISPLAY

To recall the stored image

Press MEMO DISPLAY.

MEMO DISPLAY

The stored picture is retained in memory until:
– you turn off the projection TV.
– you press OFF (in the PIP section) twice.
– you store a different image.

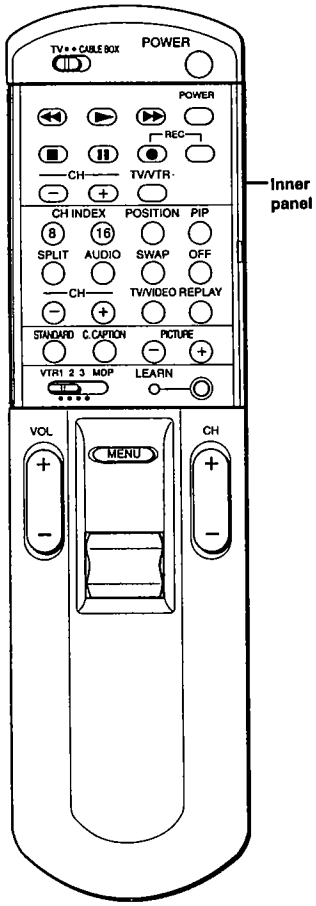
To return to the normal screen
Press MEMO DISPLAY again.

Note
You cannot display a window picture (pp. 45 – 49) while viewing a DIGITAL MEMO screen.

1-10. SELECTING A PICTURE AND SOUND MODE

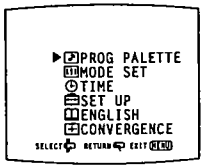
This projection TV features six modes (STANDARD, MOVIE, SPORTS, NEWS, MUSIC, GAME) that offer different picture and sound qualities. Choose the one that best suits the type of program that you want to watch.

Example: Select MOVIE mode for picture and sound that gives you the sense of being in a movie theater.

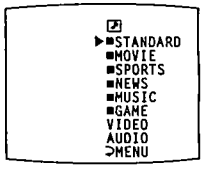


Inner panel

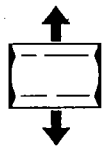
1 Press MENU.
The main menu appears, and the cursor points to "PROG PALETTE."

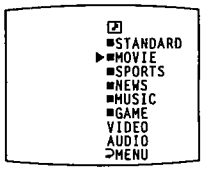


2 Click the rocker control.
The program palette menu appears.

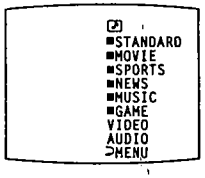


3 Press the rocker control up or down until the cursor points to "MOVIE."





4 Click the rocker control.
The "MOVIE" display turns green, indicating that MOVIE mode is selected.



To select a different mode
Repeat steps 3 – 4.

Selecting standard mode (without using the menus)

Follow these instructions to select standard mode without using the on-screen menus.

Press STANDARD.

STANDARD

When you select STANDARD mode
You receive standard picture and sound quality. Any video or audio adjustments you made ("Adjusting the Picture" pp. 50 – 54; "Adjusting the Sound" pp. 55 – 60) are cancelled and the original factory settings are restored.

When you select MOVIE mode
You receive a finely detailed picture, and a theatrical audio effect.
To further adjust picture and sound qualities, follow the instructions on pp. 50 – 54 and pp. 55 – 60, or select different sound modes from the DSP (Digital Sound Processor) menu (pp. 55 – 56).

When you select SPORTS mode
You receive a vivid, bright picture, and sound with a sports stadium effect.
To further adjust picture and sound qualities, follow the instructions on pp. 50 – 54 and pp. 55 – 60, or select different sound modes from the DSP (Digital Sound Processor) menu (pp. 55 – 56).

When you select NEWS mode
Picture noise is reduced, and you receive clear voice reproduction.
To further adjust picture and sound qualities, follow the instructions on pp. 50 – 54 and pp. 55 – 60, or select different sound modes from the DSP (Digital Sound Processor) menu (pp. 55 – 56).

When you select MUSIC mode
You receive a warmer picture, and live concert effect sound.
To further adjust picture and sound qualities, follow the instructions on pp. 50 – 54 and pp. 55 – 60, or select different sound modes from the DSP (Digital Sound Processor) menu (pp. 55 – 56).

When you select GAME mode
The picture is easier on your eyes, and sound has a surround effect.
To further adjust picture and sound qualities, follow the instructions on pp. 50 – 54 and pp. 55 – 60, or select different sound modes from the DSP (Digital Sound Processor) menu (pp. 55 – 56).

Caution
Leaving a fixed pattern on the screen for long periods of time, when operating a video game or personal computer, may damage the picture tube. To avoid this, keep the picture contrast and the brightness levels low (PICTURE and BRIGHT adjustment, pp. 50 – 51).

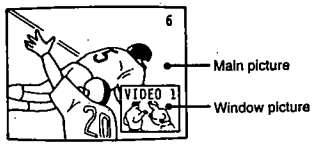
To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

1-11. WATCHING TWO OR MORE PICTURES AT ONCE (PIP)

You can watch both the main picture and one or more window pictures simultaneously, using the Picture-in-Picture (PIP) function.



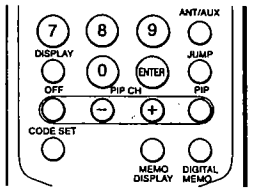
Picture-In-Picture special features
When watching the main picture and a window picture, you can:
- Choose the sound from the main or window picture (AUDIO).
- Change the position of the window picture (POSITION).
- Swap the main and window pictures (SWAP).
- Replay the main picture as a window picture (REPLAY).
- Split the screen, with the main picture on one side and the window picture on the other side (SPLIT).
- Display 8 or 16 TV channels simultaneously (CH INDEX 8/16).

Notes
- You can also use the CH +/– buttons on the Remote Commander's inner panel.
- The video label and channel caption will not appear with the window picture even if you have set them.
- If you select a blocked channel in the window picture, the display "BLOCKED" appears with the window picture. (See "Setting CHANNEL BLOCK," pp. 70 – 71.)
- If you display a DIGITAL MEMO screen (p. 42), the window picture disappears.

Displaying a window picture

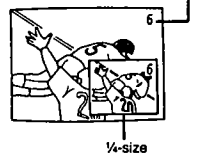
To turn PIP mode on or off, or to change TV channels, you can use the PIP buttons on the Remote Commander's outer panel. For other PIP functions, use the inner panel controls, which also include the PIP, OFF and CH +/– buttons.

Remote Commander (Outer panel)

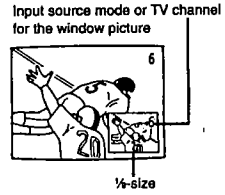


Press PIP to display a window picture

PIP



PIP



A window picture appears in the last mode you watched. Each time you press PIP, a 1/4 or 1/9 size window picture appears alternately.

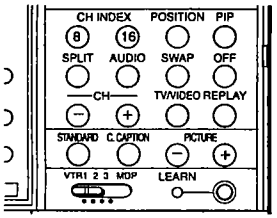
To turn PIP function off
Press OFF.
The window picture disappears.

To change TV channels in the window picture
Press TV/VIDEO to select TV mode; then press CH +/– in the PIP control area.

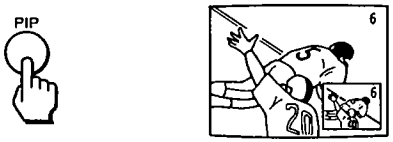
Changing the window picture input mode

Follow these instructions to select the input mode (TV/ VIDEO 1, VIDEO 2, VIDEO 3) for the window picture.

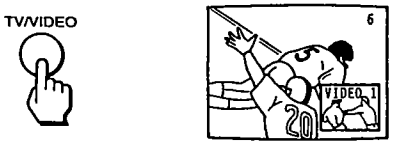
Remote Commander (inner panel)



1 Press PIP to display a window picture.



2 Press TV/VIDEO to select the input mode.
Each time you press TV/VIDEO, "TV," "VIDEO 1," "VIDEO 2" and "VIDEO 3" appear in sequence.



To receive the window picture sound
Press AUDIO.

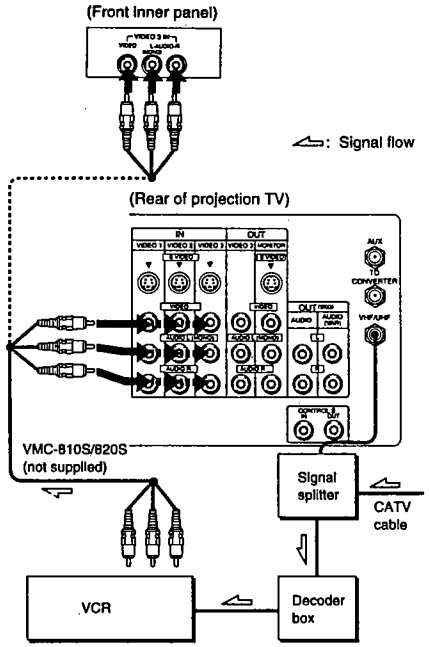
The ♪ display appears for a few seconds, indicating that the window picture sound is being received.

To restore the main picture sound
Press AUDIO again.

Note
The window picture sound is also output from the AUDIO (VAR) OUT jacks. The AUDIO OUT and MONITOR OUT jacks output the main picture sound only.

Displaying CATV input as a window picture

To use Picture-in-Picture with pay cable TV input, make the connections to your cable converter box as shown below.



After making the above connections, turn the cable connection on by following the steps on pp. 28 – 29; then continue with the steps below.

1–2 Follow steps 1 – 2 in "Changing the window picture input mode" on this page to select the video input mode for your connected VCR.

3 Put your VCR on an inactive channel (channel 3 or 4).

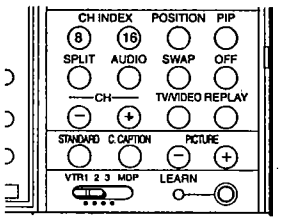
4 Change pay cable TV channels with the decoder box.

To control your cable converter box with the supplied Remote Commander
See p. 78.

Changing the position of the window picture

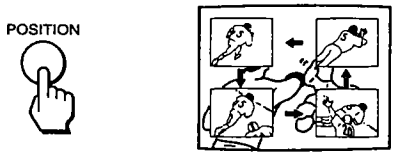
Follow these instructions to change the position of the window picture on the screen.

Remote Commander (inner panel)



1 Press PIP to display a window picture.

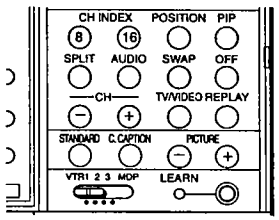
2 Press POSITION.
Each time you press POSITION, the window picture moves as illustrated.



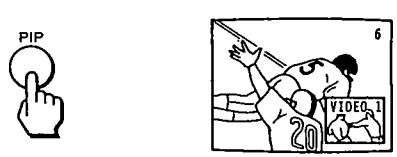
Swapping the main and window pictures

Follow these instructions to swap the input signals of the main and window pictures.

Remote Commander (inner panel)



1 Press PIP to display a window picture.

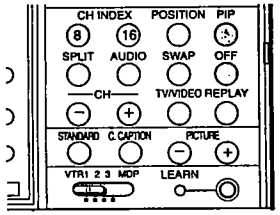


2 Press SWAP.
Each time you press SWAP, the images from the main and window pictures switch places.

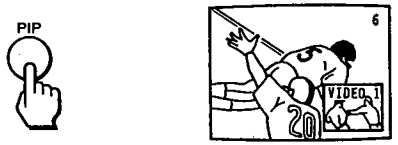
Displaying 8 TV channels at once – CH INDEX 8

Follow these instructions to display the main picture and 7 window pictures at once.

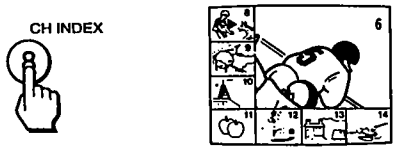
Remote Commander (inner panel)



1 Press PIP to display a window picture.



2 Press CH INDEX 8 to display seven window pictures.
Seven TV channels appear in numerical sequence, as window pictures.



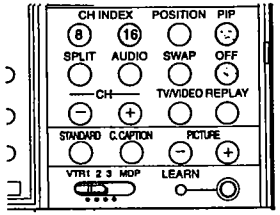
Each time you press CH INDEX 8, the next seven sequential channels appear (the main picture does not change).

To return to the normal screen
Press OFF.

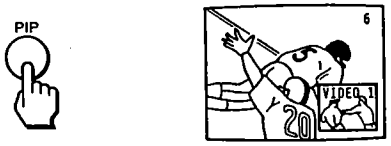
Displaying 16 TV channels at once – CH INDEX 16

Follow these instructions to display 16 window pictures at once.

Remote Commander (inner panel)



1 Press PIP to display a window picture.



2 Press CH INDEX 16 to display 16 window pictures.
16 TV channels appear in numerical sequence, as window pictures.

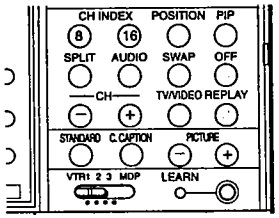
Each time you press CH INDEX 16, the next 16 sequential channels appear (the main picture does not change).

To return to the normal screen
Press OFF.

Replaying the main picture as a window picture

Follow these instructions to replay the image that appeared in the main picture two seconds before, as a window picture.

Remote Commander (inner panel)



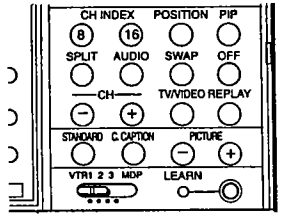
Press REPLAY.

To return to the normal screen
Press OFF.

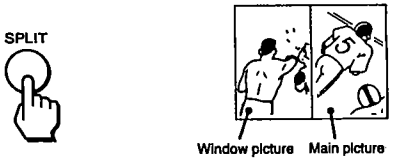
Splitting the screen

Follow these instructions to split the screen, with the window picture on the left, and the main picture on the right.

Remote Commander (inner panel)



Press SPLIT.



To return to the normal screen
Press OFF.

Note
When using SPLIT, vertical lines may appear elongated.

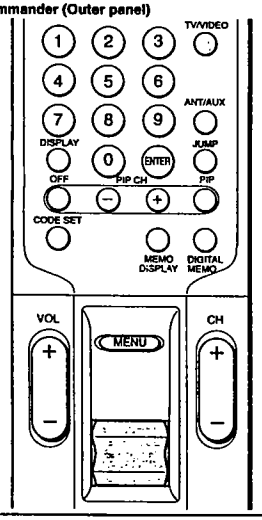
1-12. ADJUSTING THE PICTURE

You can adjust the picture (and sound, pp. 57 – 58) for each input mode (TV, VIDEO 1, VIDEO 2, VIDEO 3) by pressing TV/VIDEO on the projection TV or on the Remote Commander to select the input mode, before making the adjustments. These adjustments are retained in memory even when you turn off the projection TV, but are cancelled after you change the adjustments, or select a picture and sound mode (pp. 43 – 44).

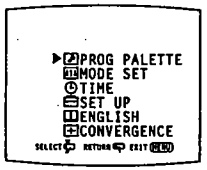
Adjusting picture quality

Follow these instructions to adjust PICTURE, HUE, COLOR, BRIGHT (brightness) and SHARP (sharpness).

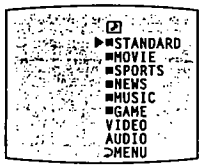
Remote Commander (Outer panel)



1 Press MENU.
The main menu appears, and the cursor points to "PROG PALETTE."

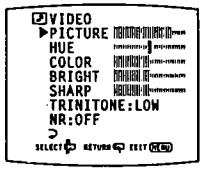


2 Click the rocker control.
The program palette menu appears.



3 Press the rocker control up or down until the cursor points to "VIDEO."

4 Click the rocker control.
The VIDEO screen appears.



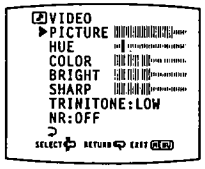
5 Press the rocker control up or down until the cursor points to the item you want to adjust.

6 Click the rocker control.
The adjustment screen appears.

7 Press the rocker control up or down to make the adjustment.

Picture quality	Press the rocker control down	Press the rocker control up
PICTURE	For decreased picture contrast with soft color	For increased picture with vivid color
HUE	Skin tones become purplish	Skin tones become greenish
COLOR	For less color intensity	For more color intensity
BRIGHT	For less brightness	For more brightness
SHARP	For less sharpness	For more sharpness

8 Click the rocker control.
The adjustment is complete, and the VIDEO screen automatically reappears.

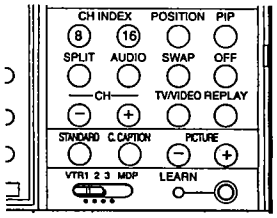


To adjust other items
Repeat steps 5 – 8.

To restore the factory settings for all the items
Select "STANDARD" on the program palette menu, and click the rocker control;
or, press STANDARD on the Remote Commander.
All the items, including TRINITONE (p. 52) and NR (p. 53) return to their original factory settings.

To adjust picture contrast
You can also adjust picture contrast with the PICTURE +/– buttons on the Remote Commander.

(Inner panel)



Press + to increase picture contrast with vivid color.
Press – to decrease picture contrast with soft color.
The picture adjustment screen appears.

To return to the previous menu
Press the rocker control up or down until the cursor points to "⊃ MENU."
Then click the rocker control.

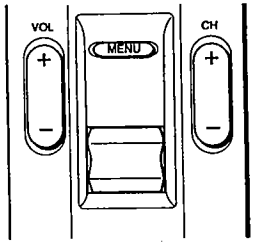
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

Setting the TRINITONE mode

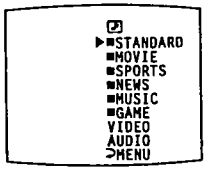
Color picture tubes are usually manufactured with a fixed color temperature (tint) that determines the "warmth" (red tint) or "coolness" (blue tint) of the picture. Use the Sony Trinitone feature to adjust the picture color to your preference.

Remote Commander



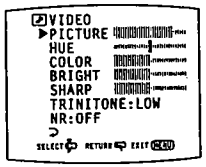
1 Press MENU.
The main menu appears, and the cursor points to "PROG PALETTE."

2 Click the rocker control.
The program palette menu appears.



3 Press the rocker control up or down until the cursor points to "VIDEO."

4 Click the rocker control.
The VIDEO screen appears.



5 Press the rocker control up or down until the cursor points to "TRINITONE."

6 Click the rocker control.
The mode display turns red.

7 Press the rocker control up or down to select "HIGH" or "LOW."

Select "HIGH" to make the picture cool (bluish).
Select "LOW" to make the picture warm (reddish).

8 Click the rocker control.
The setting is complete.

To return to the previous menu
Press the rocker control up or down until the cursor points to " MENU."
Then click the rocker control.

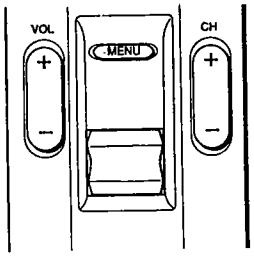
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

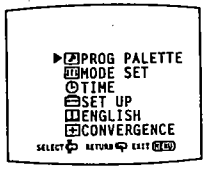
Setting NR (picture noise reduction) ON or OFF

Follow these instructions to reduce picture noise.

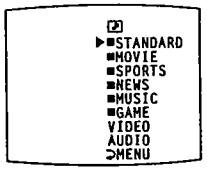
Remote Commander



1 Press MENU.
The main menu appears, and the cursor points to "PROG PALETTE."

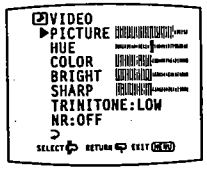


2 Click the rocker control.
The program palette menu appears.

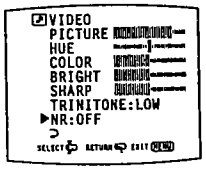


3 Press the rocker control up or down until the cursor points to "VIDEO."

4 Click the rocker control.
The VIDEO screen appears.



5 Press the rocker control up or down until the cursor points to "NR."



6 Click the rocker control.
The mode display turns red.

7 Press the rocker control up or down to select "ON" or "OFF."

Select "ON" to reduce picture noise.
Select "OFF" to restore the normal picture.

8 Click the rocker control.
The setting is complete.

To return to the previous menu
Press the rocker control up or down until the cursor points to " MENU."
Then click the rocker control.

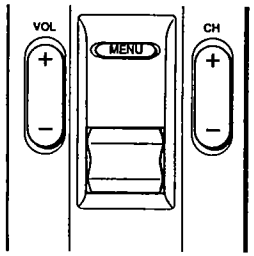
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

Setting S-VIDEO ON or OFF

Follow these instructions to set S-VIDEO on or off, depending on the kind of video equipment you have connected to the projection TV. For instructions on connecting video equipment, see pp. 15 – 18.

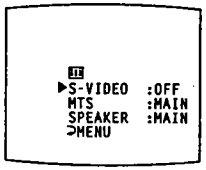
Remote Commander (Outer panel)



1 Press MENU.
The main menu appears.

2 Press the rocker control up or down until the cursor points to "MODE SET."

3 Click the rocker control.
The mode set menu appears, with the cursor pointing to "S-VIDEO."



4 Click the rocker control.
The mode display turns red.

5 Press the rocker control up or down to select "ON" or "OFF."

6 Click the rocker control.
The setting is complete.

To return to the previous menu
Press the rocker control up or down until the cursor points to "MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

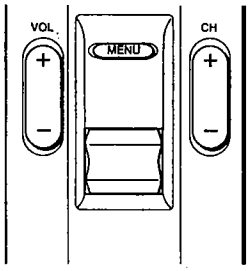
To return to the normal screen
Press MENU on the Remote Commander.

Selecting a sound mode

Use the DSP (Digital Sound Processor) menu to select the sound mode that best suits the type of sound you are listening to.

Example: Select JAZZ CLUB mode to enhance the effect when viewing a musical performance.

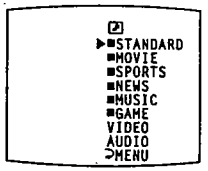
Remote Commander



1 Press MENU.
The main menu appears.

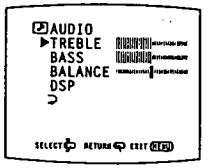
2 Press the rocker control up or down until the cursor points to "PROG PALETTE."

3 Click the rocker control.
The program palette menu appears.



4 Press the rocker control up or down until the cursor points to "AUDIO."

5 Click the rocker control.
The AUDIO screen appears.



6 Press the rocker control up or down until the cursor points to "DSP."

7 Click the rocker control
The DSP menu appears.

8 Press the rocker control up or down until the cursor points to "JAZZ CLUB."

9 Click the rocker control.
JAZZ CLUB mode is selected.

To select a different mode
Repeat steps 8 – 9. (See the next page for the different modes you can choose.)

To further adjust the sound
Follow the instructions on pp. 57 – 58.

To return to the previous menu
Press A/V WINDOW +/– until the cursor points to "MENU."
Then press RETURN.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

When you select DOLBY SURROUND* mode
You receive wraparound sound with three-dimensional audio depth and presence when you connect main speakers and optional rear speakers.

Note
You must set REAR SPEAKER to "YES" (p. 60), or the display is blacked out and cannot be selected.
When using rear speakers, control the volume with the REAR VOLUME adjustment screen.

When you select SRS AUTO mode
You receive powerfully realistic sound that recaptures audio "clues" originally present but masked in the recording process, so that the action seems to happen all around you.

When you select JAZZ CLUB mode
You receive sound that gives a sense of space, with a touch of echo added.

When you select DANCE CLUB mode
You receive the sound effect of the hard floor and wall environment of a dance club.

When you select LIVE CONCERT mode
You receive sound that simulates the effect of being present at a live concert.

When you select SIMULATED mode
You receive monaural sound with a surround-like effect.

When you select SURROUND OFF mode
You receive sound without a surround effect.

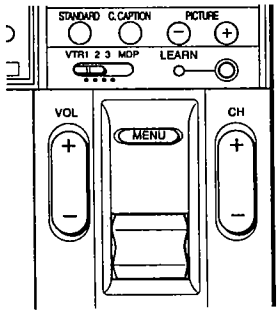
To further adjust sound qualities
Follow the instructions on pp. 57 – 58.

* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590. "Dolby" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

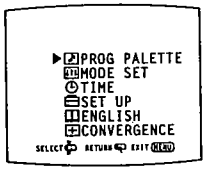
Adjusting sound quality

Follow these instructions to adjust the TREBLE, BASS and BALANCE.

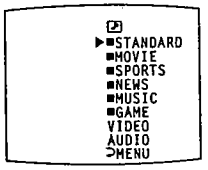
Remote Commander (Inner panel)



1 Press MENU.
The main menu appears, and the cursor points to "PROG PALETTE."



2 Click the rocker control.
The program palette menu appears.



3 Press the rocker control up or down until the cursor points to "AUDIO."

4 Click the rocker control.
The AUDIO screen appears.

5 Press the rocker control up or down until the cursor points to the item you want to adjust.

6 Click the rocker control.
The adjustment screen appears.

7 Press the rocker control up or down to make the adjustment.

Sound quality	Press the rocker control down	Press the rocker control up
TREBLE	To decrease the treble response	To increase the treble response
BASS	To decrease the bass response	To increase the bass response
BALANCE	To emphasize the left speaker's volume	To emphasize the right speaker's volume

8 Click the rocker control.
The adjustment is complete, and the AUDIO screen automatically reappears.

To adjust other items
Repeat steps 5 – 9.

To restore the factory settings for all the items
Select "STANDARD" on the program palette menu, and click the rocker control; or, press STANDARD on the Remote Commander.
All the items return to their original factory settings.

To return to the previous menu
Press the rocker control up or down until the cursor points to "MENU." Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

Selecting an MTS (Multichannel TV Sound) mode

Follow these instructions to select an MTS mode.

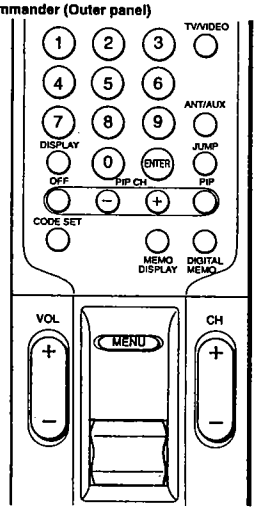
Select MAIN mode to listen to stereo sound.
The STEREO lamp on the projection TV lights up whenever a stereo broadcast is received.

Select SAP mode to listen to Second Audio Programs.

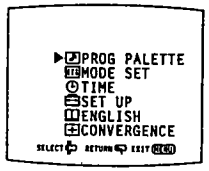
Select MONO mode to eliminate excessive noise during stereo broadcasts, caused by a weak incoming signal.

Note
If the projection TV is in video mode, the "MTS" display is shaded and cannot be selected.
Press TV/VIDEO on the projection TV or on the Remote Commander to change to TV mode.

Remote Commander (Outer panel)

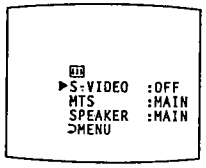


1 Press MENU.
The main menu appears.



2 Press the rocker control up or down until the cursor points to "MODE SET."

3 Click the rocker control.
The mode set menu appears.



4 Press the rocker control up or down until the cursor points to "MTS."

5 Click the rocker control.
The mode display turns red.

6 Press the rocker control up or down to select the mode you want.
Each time you press the rocker control up or down, "MAIN," "SAP" and "MONO" appear in sequence.

7 Click the rocker control.
The mode is selected.

To return to the previous menu
Press the rocker control up or down until the cursor points to " MENU." Then click the rocker control.

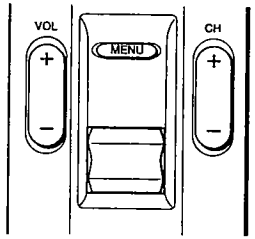
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

Setting SPEAKER — MAIN or CENTER

Follow these instructions to set SPEAKER to "CENTER" when you connect an audio system (p.19), and to "MAIN" when you want to listen to the sound from the projection TV speakers.

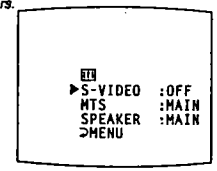
Remote Commander



1 Press MENU.
The main menu appears.

2 Press the rocker control up or down until the cursor points to "MODE SET."

3 Click the rocker control.
The mode set menu appears.



4 Press the rocker control up or down until the cursor points to "MAIN SPEAKER."

5 Click the rocker control.
The mode display turns red.

6 Press the rocker control up or down to select "MAIN" or "CENTER."

7 Click the rocker control.
The setting is complete.

To return to the previous menu
Press the rocker control up or down until the cursor points to " MENU."
Then click the rocker control.

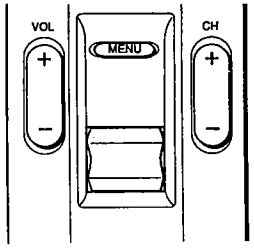
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

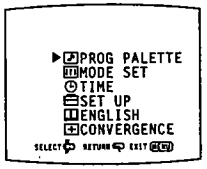
Setting REAR SPEAKER

Set REAR SPEAKER to "YES" to use optional speakers as rear speakers (p. 21).

Remote Commander

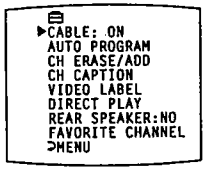


1 Press MENU.
The main menu appears.



2 Press the rocker control up or down until the cursor points to "SET UP."

3 Click the rocker control.
The set up menu appears.



4 Press the rocker control up or down until the cursor points to "REAR SPEAKER."

5 Click the rocker control.
The mode display turns red.

6 Press the rocker control up or down to select "YES."

7 Click the rocker control.
The REAR SPEAKER screen appears.

8 Press the rocker control up or down until the cursor points to the item you want to adjust.

9 Click the rocker control.
The adjustment screen appears.

10 Use the rocker control to make the adjustment.

REAR VOLUME Press the rocker control down to decrease the rear speaker volume. Press the rocker control up to increase the rear speaker volume.
INPUT BALANCE Press the rocker control down to improve the input balance. (Set to the lowest point for best input balance.)

Notes

- Setting REAR SPEAKER to "NO" does not turn off the rear speaker sound. Control the rear speaker volume with the REAR VOLUME adjustment.
- While the INPUT BALANCE adjustment screen is displayed, the sound from the front speakers is cut off.

11 Click the rocker control.
The setting is complete.

To set REAR SPEAKER to "NO"
Repeat steps 1 – 11, and select "NO" in step 6.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU." Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

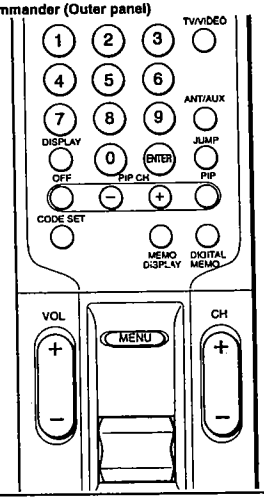
To return to the normal screen
Press MENU on the Remote Commander.

Setting channel captions — CH CAPTION

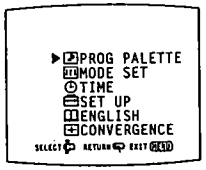
Follow these instructions to caption each channel number display with a name, for instance, the television station call letters. (You can set up to four letters or numbers).

Example: Caption channel 15 as "NBC."

Remote Commander (Outer panel)

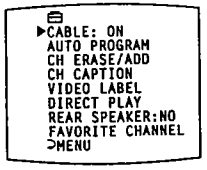


1 Press MENU.
The main menu appears.



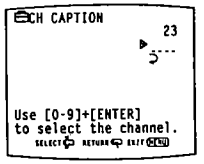
2 Press the rocker control up or down until the cursor points to "SET UP."

3 Click the rocker control.
The set up menu appears.

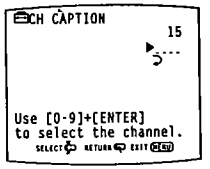


4 Press the rocker control up or down until the cursor points to "CH CAPTION."

5 Click the rocker control.
The CH CAPTION screen appears.

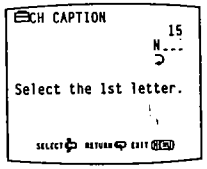


6 Press CH +/–, or press 1, 5 and ENTER to set channel "15."



7 Click the rocker control.
The first caption space turns red.

8 Press the rocker control up or down to select "N."
Each time you press the rocker control up or down, "0" – "9," "A" – "Z," "&," "/," "-" and "_" (blank space) appear in sequence.



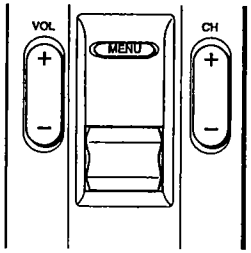
9 Click the rocker control.
The second caption space turns red.

(Continued)

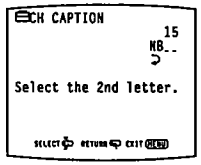
Setting channel captions – CH CAPTION

(Cont'd. from prev. page)

Remote Commander

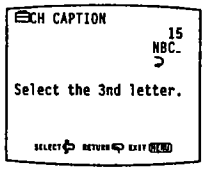


10 Press the rocker control up or down to select "B."



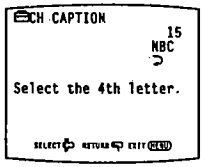
11 Click the rocker control.
The third caption space turns red.

12 Press the rocker control up or down to select "C."



13 Click the rocker control.
The fourth caption space turns red.

14 Press the rocker control up or down to select a blank space.



15 Click the rocker control.
The setting is complete.
When you select or display the channel number, the channel caption also appears.

To caption more channels
Repeat steps 6 – 15.

To erase unnecessary captions
Display the CH CAPTION screen, select the channel with the caption you want to erase, and select blank spaces for the channel caption; then click the rocker control.
The caption for that channel is erased.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

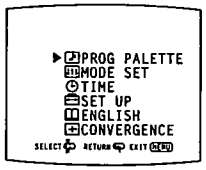
Note
You can set up to 32 channel captions. If the memory is full, "The memory is full, sorry" appears on the screen. Erase any unnecessary captions, and begin again.

Setting VIDEO LABEL

Follow these instructions to label each input mode, in order to identify the equipment connected to each input terminal.

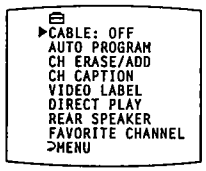
Example: Label VIDEO 1 IN as "VHS."

1 Press MENU.
The main menu appears.



2 Press the rocker control up or down until the cursor points to "SET UP."

3 Click the rocker control.
The set up menu appears.



4 Press the rocker control up or down until the cursor points to "VIDEO LABEL."

5 Click the rocker control.
The VIDEO LABEL screen appears.

6 Press the rocker control up or down until the cursor points to the input mode you want to label. (In this case, the cursor is already pointing to "VIDEO 1.")

7 Click the rocker control.
The label display turns red.

8 Press the rocker control up or down to select "VHS."

Each time you press the rocker control up or down, the label changes:

VIDEO 1 → BETA → 8mm → VHS → LD → S-VIDEO

9 Click the rocker control.
The setting is complete.
When you select or display the video mode, the video label appears.

To label other input modes
Repeat steps 6 – 9.

To change a label
Same as above.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU." Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

1-15. USING TIMER-ACTIVATED FUNCTIONS

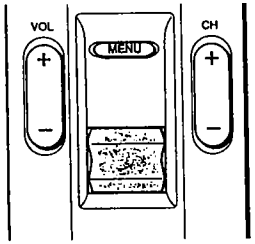
Setting DAYLIGHT SAVING

If you live in an area that uses daylight savings time, set DAYLIGHT SAVING to "YES" or "NO" depending on the season, before setting the current time. At the next daylight savings date, you will be able to automatically adjust all the time-related settings (CURRENT TIME, ON/OFF TIMER and CHANNEL BLOCK) simply by changing the DAYLIGHT SAVING setting.

When setting DAYLIGHT SAVING:

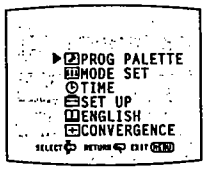
- **After the first Sunday in April (spring daylight savings)**
  Set to "YES" before setting the current time.
  Then, on the last Sunday in October (fall daylight savings), set to "NO."
  All the time-related settings automatically move one hour back.
- **After the last Sunday in October (fall daylight savings)**
  Set to "NO" before setting the current time.
  Then, on the first Sunday in April (spring daylight savings), set to "YES."
  All the time-related settings automatically move one hour ahead.

Remote Commander



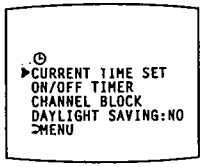
Follow these instructions to set DAYLIGHT SAVING to "YES" or "NO."

1 Press MENU.
The main menu appears.



2 Press the rocker control up or down until the cursor points to "TIME."

3 Click the rocker control.
The time menu appears.



4 Press the rocker control up or down until the cursor points to "DAYLIGHT SAVING."

5 Click the rocker control.
The mode display turns red.

6 Press the rocker control up or down to select "YES" or "NO."
The setting is complete.

7 Click the rocker control.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

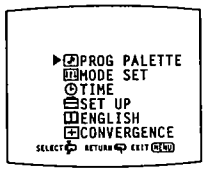
To return to the normal screen.
Press MENU on the Remote Commander.

Setting the clock — CURRENT TIME SET

Follow these instructions to set the current time. The correct current time must be set in order to use the other time-related functions (DAYLIGHT SAVING, ON/OFF TIMER, CHANNEL BLOCK).

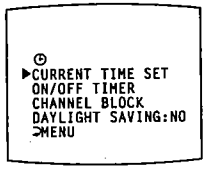
Example: Set the time to 3:15 PM, Monday.

1 Press MENU.
The main menu appears.



2 Press the rocker control up or down until the cursor points to "TIME."

3 Click the rocker control.
The time menu appears, and the cursor points to "CURRENT TIME SET."



4 Click the rocker control again.
The CURRENT TIME SET screen appears, with a reminder to set DAYLIGHT SAVING.

If you do not need to set DAYLIGHT SAVING, click the rocker control and continue from step 5.

To set daylight saving

a Press the rocker control up or down until the cursor points to "DAYLIGHT SAVING."

b Click the rocker control.
The time menu appears, and the cursor points to "DAYLIGHT SAVING."

c Click the rocker control.

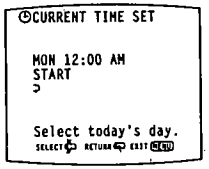
d Press the rocker control up or down to select "YES" or "NO."

e Click the rocker control.
The setting is complete.

To set the time
Press the rocker control up or down until the cursor points to "CURRENT TIME SET"; click the rocker control, then continue from step 5.

5 Click the rocker control.
The CURRENT TIME SET screen appears, and the "SUN" display appears (red).

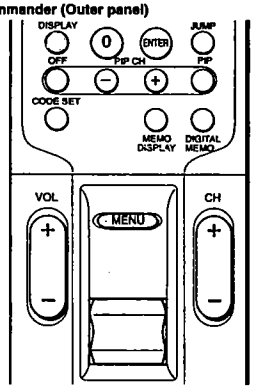
6 Press the rocker control up or down to select "MON."
Each time you press the rocker control up or down, the day changes consecutively.



(Continued)

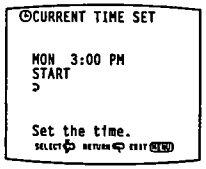
Setting the clock — CURRENT TIME SET
(Cont'd from prev. page)

Remote Commander (Outer panel)



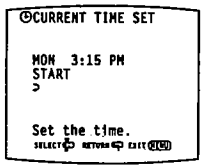
7 Click the rocker control.
The hour and am/pm displays turn red.

8 Press the rocker control up or down to set "3:00PM."
Each time you press the rocker control up or down, the hour changes in sequence beginning with "12:00AM."



9 Click the rocker control.
The minute display turns red.

10 Press the rocker control up or down to select "15" (minutes).
Each time you press the rocker control up or down, the minutes change in sequence.



11 Click the rocker control.
The cursor points to "START."

12 Check the actual time, and click the rocker control to start the clock.
The setting is complete.

To reset the time
Display the CURRENT TIME SET screen and repeat steps 5 – 12.

To display the current time
Press DISPLAY.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

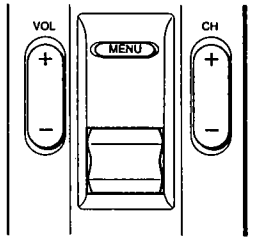
To return to the normal screen.
Press MENU on the Remote Commander.

Setting the ON/OFF TIMER

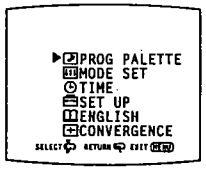
Follow these instructions to make the program of your choice appear on the screen at a specified time.

Example: Set the timer to turn on the projection TV every Monday through Friday at 1:30 AM for 3 hours, on channel 8, as PROGRAM 1. (You can set up to three programs.)

Remote Commander

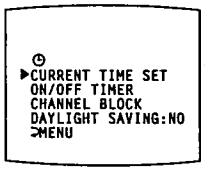


1 Press MENU.
The main menu appears.



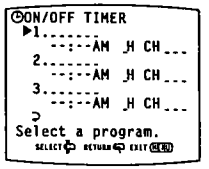
2 Press the rocker control up or down until the cursor points to "TIME."

3 Click the rocker control.
The time menu appears.



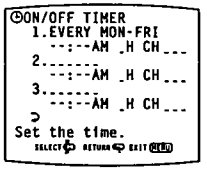
4 Press the rocker control up or down until the cursor points to "ON/OFF TIMER."

5 Click the rocker control.
The ON/OFF TIMER screen appears, and the cursor points to "1."

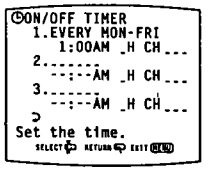


6 To set program 1, click the rocker control.
(To set program 2 or 3, press the rocker control up or down until the cursor points to that program; then click the rocker control.)
The day input space turns red.

7 Press the rocker control up or down to select "EVERY MON-FRI"; then click the rocker control.
Each time you press the rocker control up, the days of the week change as shown in Fig. 1 (p. 67).



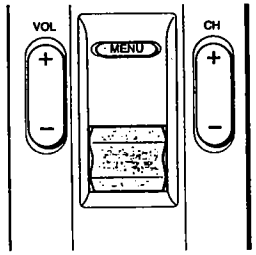
8 Press the rocker control up or down to select "1:00AM"; then click the rocker control.
Each time you press the rocker control up or down, the hour changes in sequence.



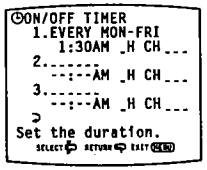
(Continued)

Setting the ON-OFF TIMER *(Cont'd from prev. page)*

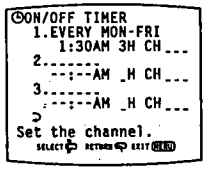
Remote Commander



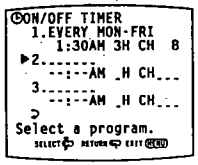
9 Press the rocker control up or down to select "30" (minutes);
Then click the rocker control.
Each time you press the rocker control up or down, the minutes change in sequence.



10 Press the rocker control up or down to select "3" (hour duration); then click the rocker control.
Each time you press the rocker control up or down, the duration changes from "1" – "6" in sequence.



11 Press the rocker control up or down to select "8" (channel); then click the rocker control.
The TIMER/STAND BY indicator lights, indicating that the setting is complete.
Each time you press the rocker control up or down, the channel number changes from 1 – 125 in sequence.



The display "TV WILL TURN OFF" appears on the screen one minute before the timer duration ends.

To set program 2 or 3.
Click the rocker control and repeat steps 6 – 11.

To erase an ON/OFF TIMER setting
Display the ON/OFF TIMER screen, select the setting you want to erase, and select the underlined spaces for the day setting.
The ON/OFF TIMER setting is erased.

To enter a new ON/OFF TIMER setting
Display the ON/OFF TIMER screen and repeat steps 6 – 11.

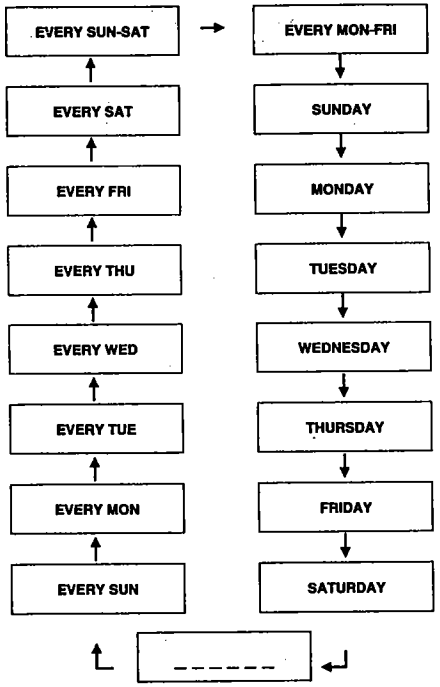
To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

Note
If you unplug the projection TV or a power failure occurs, both the clock and timer settings will be erased. Reset the current time; then set the timer.

Fig. 1
Selecting the day(s) of the week
When you press the rocker control up, the days of the week appear in the following order:

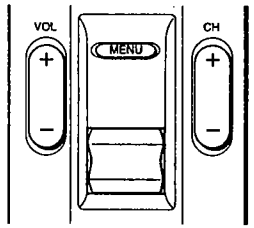


Setting CHANNEL BLOCK

Follow these instructions to prevent a channel from appearing on the screen during the time that you specify. You can use this function to prevent children from watching unsuitable programs.

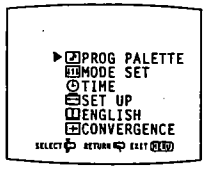
Example: Set CHANNEL BLOCK every Saturday at 4:30 PM for 1 hour, on Channel 12.

Remote Commander



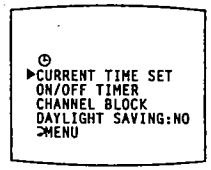
Note
If you have not set the current time, the "CHANNEL BLOCK" display is shaded and cannot be selected.

1 Press MENU.
The main menu appears.



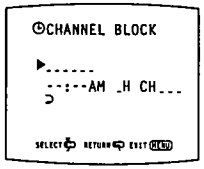
2 Press the rocker control up or down until the cursor points to "TIME."

3 Click the rocker control.
The time menu appears.

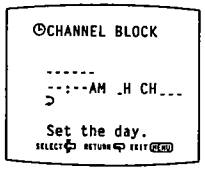


4 Press the rocker control up or down until the cursor points to "CHANNEL BLOCK."

5 Click the rocker control.
The CHANNEL BLOCK screen appears, and the cursor points to the day input space.



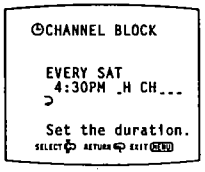
6 Click the rocker control.
The day input space turns red.



7 Press the rocker control up or down to select "EVERY SAT"; then click the rocker control.
Each time you press the rocker control up or down, the days of the week change as shown in Fig. 1 (p. 67).

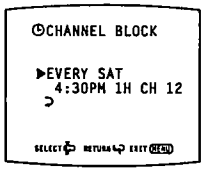
8 Press the rocker control up or down to select "4:00PM"; then click the rocker control.
Each time you press the rocker control up or down, the hour changes in sequence.

9 Press the rocker control up or down to select ":30" (minutes); then click the rocker control.
Each time you press the rocker control up or down, the minutes change in sequence.

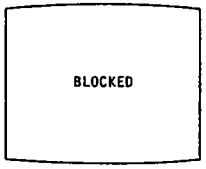


10 Press the rocker control up or down to select "1" (hour duration); then click the rocker control.
Each time you press the rocker control up or down, the duration changes from "1" – "6" in sequence.

11 Press the rocker control up or down to select "12" (channel); then click the rocker control.
The setting is complete.
Each time you press the rocker control up or down, the channel number changes from "1" – "125" in sequence.



At the specified time, "BLOCKED" appears in red on the screen, and the picture of the specified channel is blocked and the sound is muted.



To erase a CHANNEL BLOCK setting
Display the CHANNEL BLOCK screen and select the underlined spaces for the day setting.
The CHANNEL BLOCK setting is erased.

To enter a new CHANNEL BLOCK setting
Display the CHANNEL BLOCK screen and repeat steps 4 – 10. (You can only set one CHANNEL BLOCK at a time.)

To return to the previous menu
Press the rocker control up or down until the cursor points to "⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

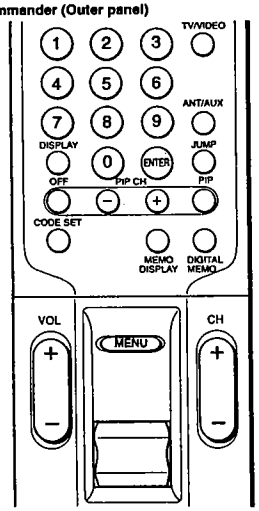
To return to the normal screen.
Press MENU on the Remote Commander.

Note
If the ON/OFF TIMER is set for an overlapping time (pp. 67 – 69), the later time setting takes precedence. For example, if CHANNEL BLOCK is set for 2:00 PM and ON/OFF TIMER is set for 3:00 PM, ON/OFF TIMER will take effect at 3:00 PM.

1-16. SETTING FAVORITE CHANNEL

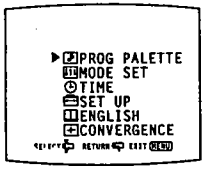
By setting FAVORITE CHANNEL, you can select the channels you use most frequently (up to seven channels) simply by clicking the rocker control on the Remote Commander.

Remote Commander (Outer panel)



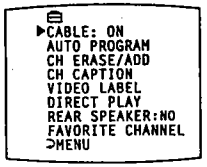
Follow these instructions to set the channels.

1 Press MENU.
The main menu appears.



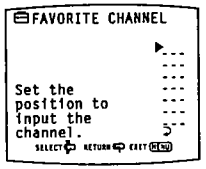
2 Press the rocker control up or down until the cursor points to "SET UP."

3 Click the rocker control.
The set up menu appears.



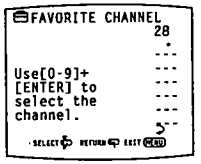
4 Press the rocker control up or down until the cursor points to "FAVORITE CHANNEL."

5 Click the rocker control.
The FAVORITE CHANNEL screen appears, and the cursor points to the first channel position.



6 Press the rocker control up or down to select the channel position; then click the rocker control.

7 Press 0 – 9 and ENTER to set the channel number.



8 Click the rocker control.
The setting is complete.

To set other channels
Repeat steps 6 – 8.

To erase a favorite channel setting
Press the rocker control up or down until the cursor points to the channel number you want to erase; click the rocker control, then press 0 and ENTER.

To reset a favorite channel setting
Display the FAVORITE CHANNEL screen and repeat steps 6 – 8.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU." Then click the rocker control.

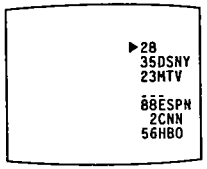
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

Selecting a favorite channel

After setting the channels, follow these instructions to select the channel you want to watch.

1 Click the rocker control.
The FAVORITE CHANNEL display appears.



Note
If you have set channel captions (pp. 61 – 62), the captions appear with the channel numbers.

2 Press the rocker control up or down to select the channel you want to watch; then click the rocker control.
The channel is selected.

If you click the rocker control on the Remote Commander before setting FAVORITE CHANNEL, this screen appears.

Follow steps 1 – 8 to set your favorite channels, and then make the selection.

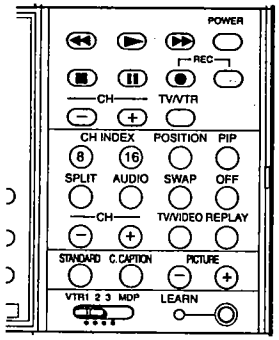
1-17. USING THE PROGRAMMABLE REMOTE COMMANDER

You can operate other video equipment (such as VCRs, video disc players and cable boxes) that have an infrared remote detector with this supplied Remote Commander.

Operating Sony video equipment

Follow these instructions to operate Sony video cassette recorders (Beta, 8 mm and VHS) and video disc players (including multi-disc players).

Remote Commander (Inner panel)



1 Set the VTR1-2-3 MDP selector according to the video equipment you want to operate.

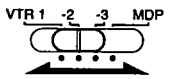


Fig. 2: Video equipment settings

If you want to operate a:	set to:
Beta, ED Beta VCR	VTR 1
8 mm VCR	VTR 2
VHS VCR	VTR 3
Video disc player	MDP

2 Use the video operating buttons to control the connected equipment.

Fig. 3: Operating a VCR (VTR1, 2, 3)

To turn on or off	Press POWER.
To change channels (when watching TV programs through the VCR's tuner)	Press CH +/–.
To record	Press ● and REC simultaneously.
To play	Press ▶.
To stop	Press ■.
To fast forward	Press ▶▶.
To rewind the tape	Press ◀◀.
To pause	Press ❚❚. *To resume normal playback, press again.*
To search the picture forward and backward	Keep pressing ▶▶ or ◀◀ during playback. *To resume normal playback, release the button.*
To change input mode	Press TV/VTR.

Fig. 4: Operating a Video Disc Player (MDP)

To turn on or off	Press POWER.
To play	Press ▶.
To stop	Press ■.
To pause	Press ❚❚. *To resume normal playback, press again.* **Note** This function is effective only for CAV (standard-play disc). With CLV (extended-play disc), the projection TV goes off (standby mode) if you press ❚❚.
To search the picture forward and backward	Keep pressing ▶▶ or ◀◀ during playback. *To resume normal playback, release the button.*

Notes

- If the video equipment does not have a certain function, the corresponding button on this Remote Commander will not operate.
- If you set another manufacturer's code to a VTR1-2-3 MDP selector position (pp. 76 – 77), you must also set the Sony code to operate Sony equipment.

Caution

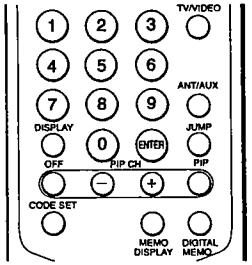
When you replace the batteries, do it within approximately 30 minutes. Otherwise the settings you made under the Pre-Programmed function (pp. 76 – 78) and Learning function (p. 79) may be erased.

Operating non-Sony or Sony video equipment

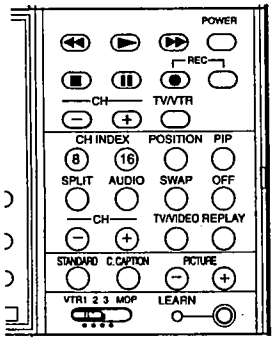
Follow these instructions to set the manufacturer's code, which will enable you to operate non-Sony and Sony video equipment with the pre-programmed Remote Commander.

Example: Operate an RCA video cassette recorder connected to the VIDEO 2 IN jacks.

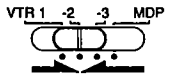
Remote Commander (Outer panel)



(Inner panel)



1 Set the VTR1-2-3 MDP selector to VTR2.



Note
To use another manufacturer's equipment besides a Sony VCR, set the selector to a position not being used for your Sony video equipment.

2 While pressing CODE SET, press 0, 7 and ENTER to set RCA's code number. (For manufacturer code numbers, see Figs. 5, 6 and 7 on p. 77.)

A long beep sounds, indicating that the code has been set.

Note
If you press a wrong code, or if the code has not been set, four short beeps sound. Repeat step 3 to set the code.

3 Use the video operating buttons to operate the connected equipment. (see Fig. 3 on p. 74 and Fig. 4 on p. 75.)

Fig. 5: VCR manufacturer code numbers

MANUFACTURER	CODE
SONY	01, 02, 03
CANON	05
EMERSON	22, 30, 33
FISHER	10, 11, 12, 15
FUNAI	29
GENERAL ELECTRIC	05, 08
GOLDSTAR	25
HITACHI	07, 08, 36
JVC	16, 35
MAGNAVOX	05, 06, 09
MITSUBISHI	18, 19, 26, 27
MULTITECH	29
NEC	16, 23, 31
PANASONIC	05, 06
PHILCO	05, 06
PHILIPS	05, 06, 09
QUASAR	05, 06
RCA	07, 08
SAMSUNG	24, 32
SANYO	11, 15
SCOTT	21
SHARP	13, 14
SHINTOM	34
SYLVANIA	05, 06, 09
SYMPHONIC	29
TEKNIKA	28, 29
TOSHIBA	20, 21
TOTE VISION	25
ZENITH	17

Fig. 6: MDP manufacturer code numbers

MANUFACTURER	CODE
SONY	04
KENWOOD	58
MAGNAVOX	52
MARANZ	54
MITSUBISHI	51
PANASONIC	55
PHILIPS	52
PIONEER	51
RCA	51
SANYO	57
SHARP	56
YAMAHA	53

Fig. 7: Sony Equipment and Code Numbers

SONY EQUIPMENT	CODE
Beta, ED Beta VCR	01
8 mm VCR	02
VHS VCR	03
Video disc player	04

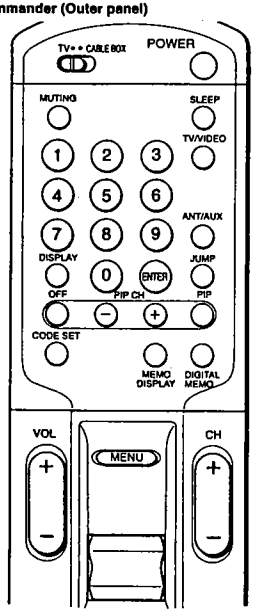
Note
In some rare cases, you may not be able to operate your non-Sony video equipment with the supplied Remote Commander. This is because your equipment may use a code that is not provided with this Remote Commander. In this case, please use the equipment's own remote control unit.

Operating a cable converter box

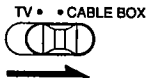
Follow these instructions to set the manufacturer's code, which will enable you to operate a connected cable converter box with the pre-programmed Remote Commander.

Example: Operate a connected Zenith cable converter box.

Remote Commander (Outer panel)



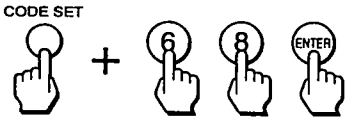
1 Set the TV/CABLE BOX selector to CABLE BOX.



Notes

- If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some rare cases, your equipment may use a code that is not provided with this Remote Commander and you may not be able to operate your cable converter box with the supplied Remote Commander. In this case, use the equipment's own remote control unit.

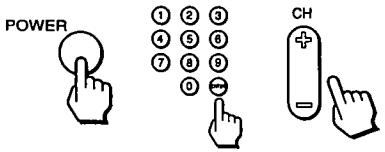
2 While pressing CODE SET, press 6 and 8 (Zenith's code number — see Fig. 8) and ENTER.



A long beep sounds, indicating that the code has been set.

Note
If you press a wrong code, or if the code has not been set, four short beeps sound. Repeat step 2 to set the code.

3 Use the projection TV control buttons (POWER, 0 – 9, ENTER and CH +/–) to operate the cable converter box.



To return to the normal screen
Set the TV/CABLE BOX selector to TV; then use the projection TV control buttons to control the projection TV.

For more details on operating the cable box
Refer to the operating instructions that come with the cable box.

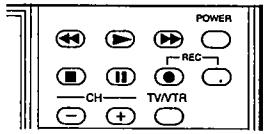
Fig. 8: Cable box manufacturer code numbers

MANUFACTURER	CODE
JERROLD	60, 61, 62, 63, 64, 65
PIONEER	69, 70
SCIENTIFIC ATLANTA	66, 67
TOCOM	71, 72
ZENITH	68

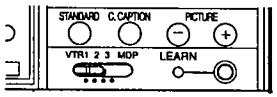
Operating non-Sony or Sony audio and video equipment (Learning function)

Follow these instructions to "teach" any of the programmable buttons to operate the function of another Remote Commander. Use Learning in order to operate non-Sony and Sony audio equipment, and a remote controlled cable converter box or video equipment whose manufacturer code is not listed (Fig. 5, Fig. 6 – p. 77; Fig. 8 – p. 78).

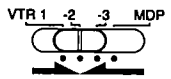
Remote Commander (Inner panel)
Programmable buttons



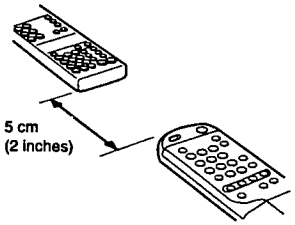
LEARN button and indicator lamp



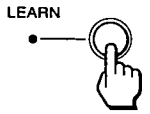
1 Set the VTR1-2-3 MDP selector to VTR3 or MDP. (Learning will not work in VTR1 or VTR2 settings.)



2 Place the supplied Remote Commander head to head with equipment's remote commander, approximately 5 cm (2 inches) apart.



3 Press LEARN.
The LEARN indicator lights up (red).



4 Momentarily press the button of the supplied Remote Commander that you want to learn a function.
The LEARN indicator goes off and lights up again, and a short beep sounds, indicating that the Remote Commander is ready for learning.

The Remote Commander beeps repeatedly if an error has occurred. Repeat this step.

5 Press and hold down the button of the other remote commander, whose function you want to "teach," until the LEARN indicator turns red.
A long beep sounds and the LEARN indicator goes off and lights up again, indicating that learning is complete. If not, repeat steps 4 and 5.

6 Repeat steps 4 and 5 to teach functions to other buttons.

7 Press LEARN.
The LEARN indicator lamp lights up (red), then goes off, indicating that learning is complete.

For accurate learning
Do not move the remote commanders during the learning process.

Notes

- If the memory is full, three short beeps sound and the LEARN indicator flashes off and on. Use learning to re-program a button whose learned function you do not use often; the previously learned function is erased.
- If the other remote commander's signal cannot be learned, a short beep sounds and the LEARN indicator flashes once.
- If you press a button that cannot be used for learning, four short beeps sound and the LEARN indicator flashes four times.

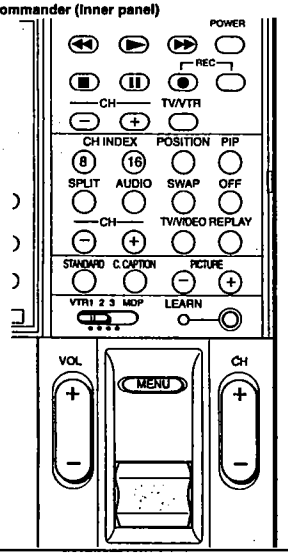
Selecting a VCR mode directly — DIRECT PLAY

Follow these instructions to switch from TV to VCR mode by simply pressing the ► (playback) button on the supplied Remote Commander.

Example: Connect your VCR to the VIDEO 1 IN jacks, and set the VTR1-2-3 MDP selector to VTR2. When you press ►, the input mode changes to the VCR connected to the VIDEO 1 IN jacks.

After completing the steps below, the VTR selector position is retained in the projection TV's memory.

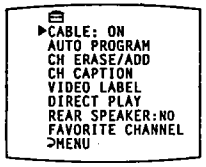
Remote Commander (inner panel)



1 Press MENU.
The main menu appears.

2 Press the rocker control up or down until the cursor points to "SET UP."

3 Click the rocker control.
The set up menu appears.

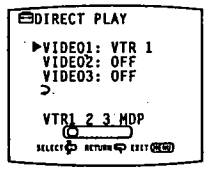


4 Press the rocker control up or down until the cursor points to "DIRECT PLAY."

5 Click the rocker control.
A message screen appears.

Note
This screen reminds you to set the manufacturer's code, if you have not already done so (pp. 76 – 78).

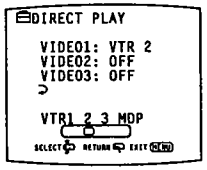
6 Click the rocker control again.
The DIRECT PLAY screen appears.



7 Press the rocker control up or down until the cursor points to the video input mode. (When the video equipment is connected to VIDEO 1 IN, select "VIDEO1.")

8 Click the rocker control.
The mode display turns red.

9 Press the rocker control up or down to select the VTR selector mode you have set on the Remote Commander. (When the VTR1-2-3 MDP selector is set to VTR2, select "VTR 2.")
Each time you press the rocker control up or down, "VTR 1," "VTR 2," "VTR 3," "MDP" and "OFF" appear in sequence.



10 Click the rocker control.
The direct play setting is complete.

To set direct play for other connected video equipment
Repeat steps 7 – 10.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

1-18. TROUBLESHOOTING

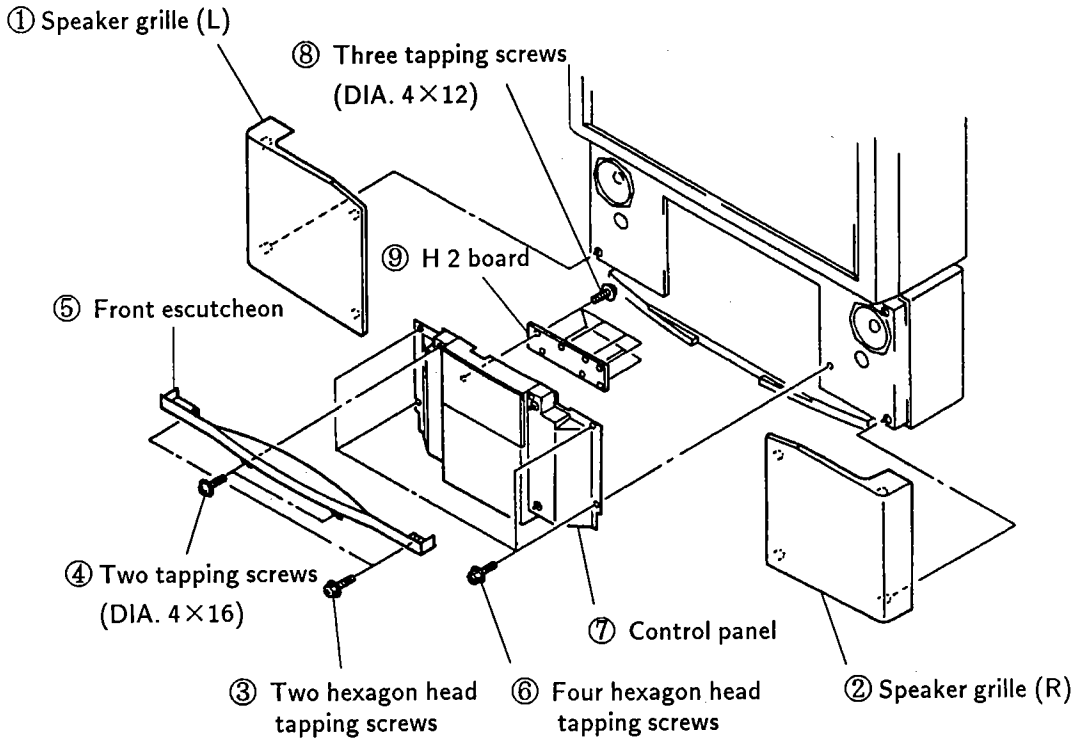
Disturbances in picture and sound can often be eliminated by checking the symptoms and following the suggestions listed here. If the problem still cannot be solved, contact your nearest service facility.

Symptom	Possible causes and remedies
No picture (screen not lit), no sound	• Make sure POWER is switched on. • Check the power cord connection. • Check that the TV/VIDEO and VTR1-2-3 MDP controls are set correctly. • Make sure that the TV/CABLE BOX selector is set to TV.
Poor or no picture (screen not lit), good sound	• Adjust the picture using the VIDEO screen (pp. 50 – 53). • Check the antenna/cable connections. • Adjust the color registration (pp. 26 – 27).
Good picture, no sound	• Press VOLUME + on the projection TV or VOL + on the Remote Commander. • Press MUTING on the Remote Commander. • Check the MTS setting (p. 58). • Check that the TV/VIDEO and VTR1-2-3 MDP controls are set correctly. • Make sure SPEAKER is set correctly (p. 59).
No color for color programs	• Check the HUE and COLOR settings (pp. 50 – 51).
Snow and noise only	• Check that it is an active or correct channel. • Check the cable setting. • Check the ANT/AUX button setting. • Check antenna/cable connections.
Dotted lines or stripes	This is often caused by local interference (for example, cars, neon signs and hairdryers). Adjust the telescopic aerial for minimum interference.
Double images or ghosts	Reflections from nearby mountains or buildings often cause this problem. Connecting a highly directional outdoor antenna or a CATV cable may improve the picture.
Remote control does not operate	• Check the battery in the Remote Commander.
No picture and/or sound for the connected equipment	• Check that the TV/VIDEO button is set correctly. • Check that the connections are properly made. • Check that the power of the connected equipment is turned on. • Check that the connected equipment is set correctly.
Try another channel. It could be station trouble.	

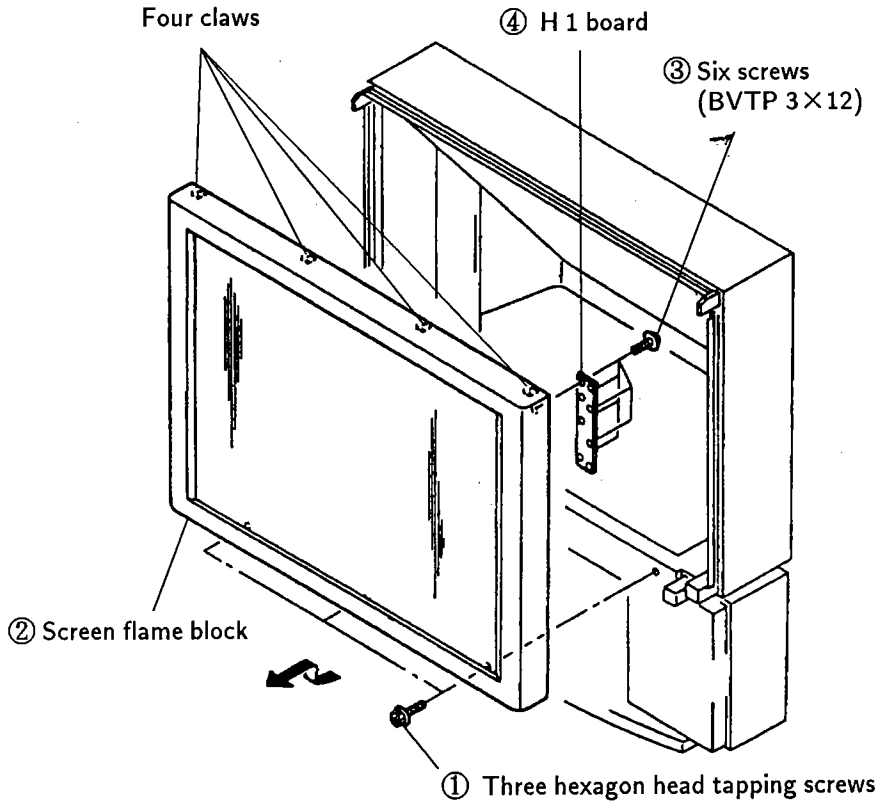
SECTION 2

DISASSEMBLY

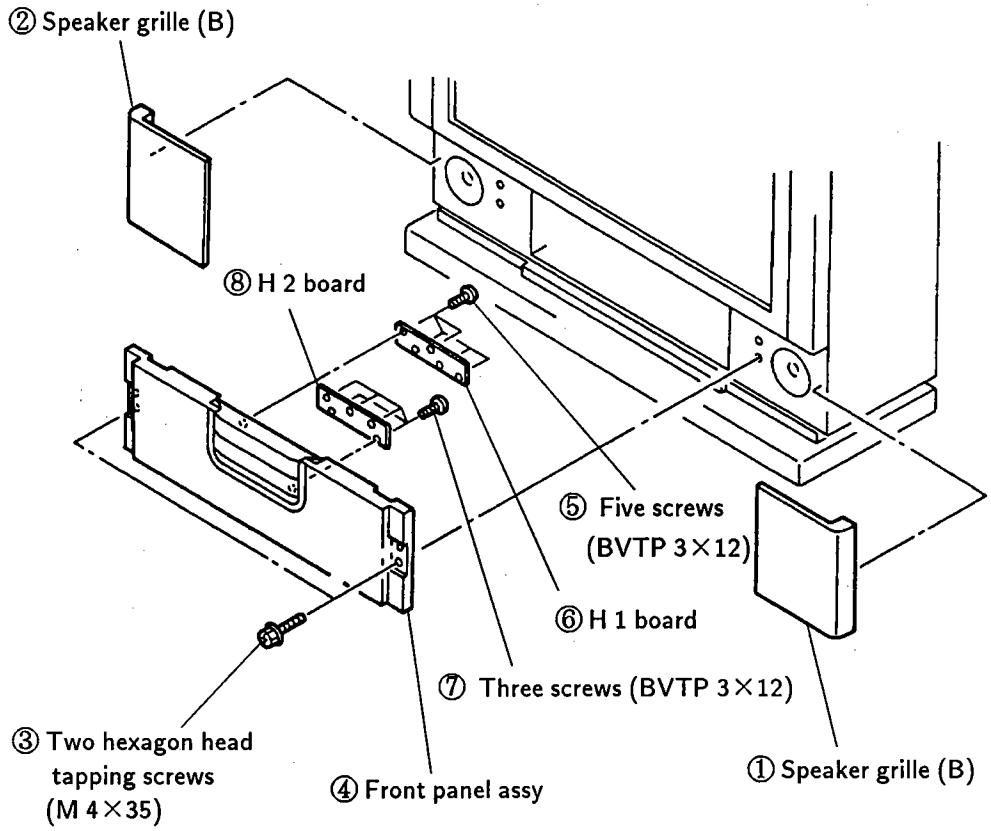
2-1. H 2 BOARD REMOVAL (KP-46 XBR 25/53 XBR 25 (US/CND) only)



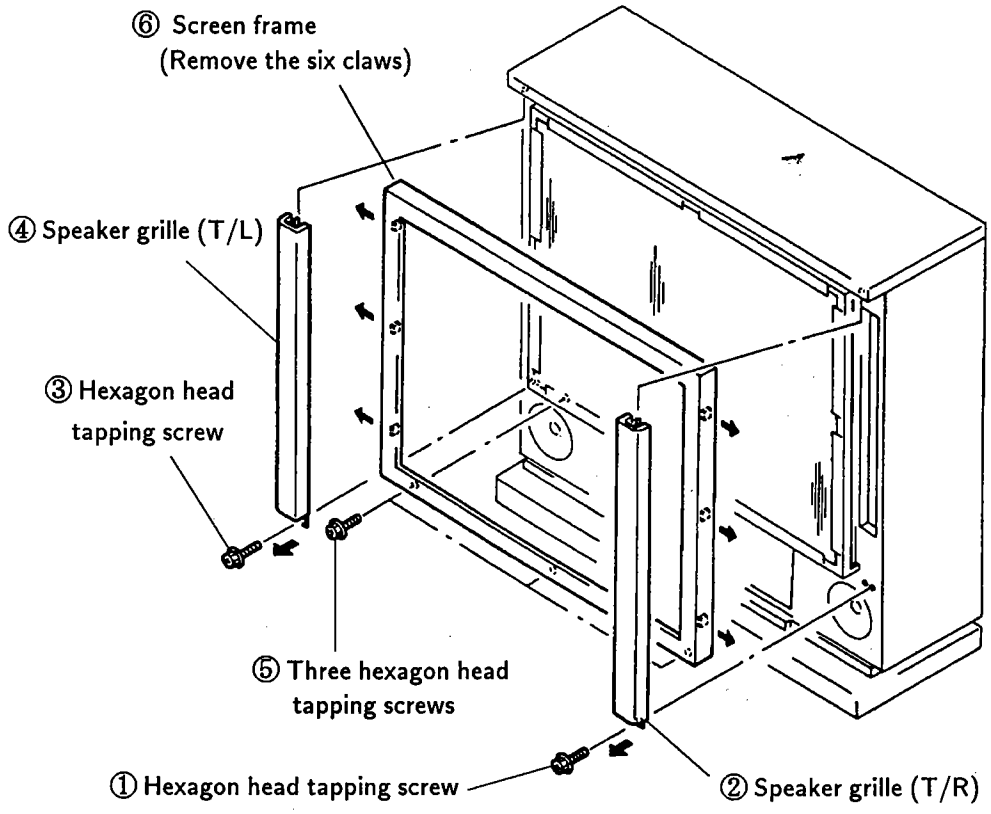
2-2. H 1 BOARD REMOVAL (KP-46 XBR 25/53 XBR 25 (US/CND) only)



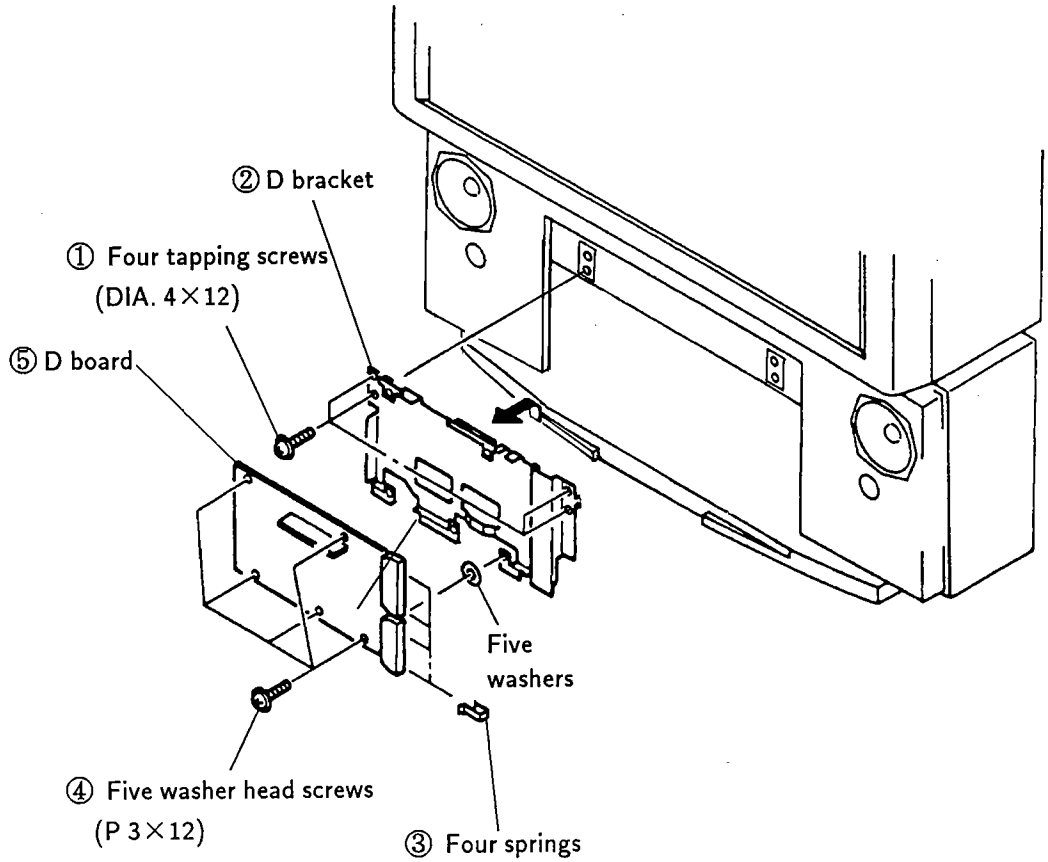
2-3-1. H 1 AND H 2 BOARDS REMOVAL (KP-61 XBR 28 only)



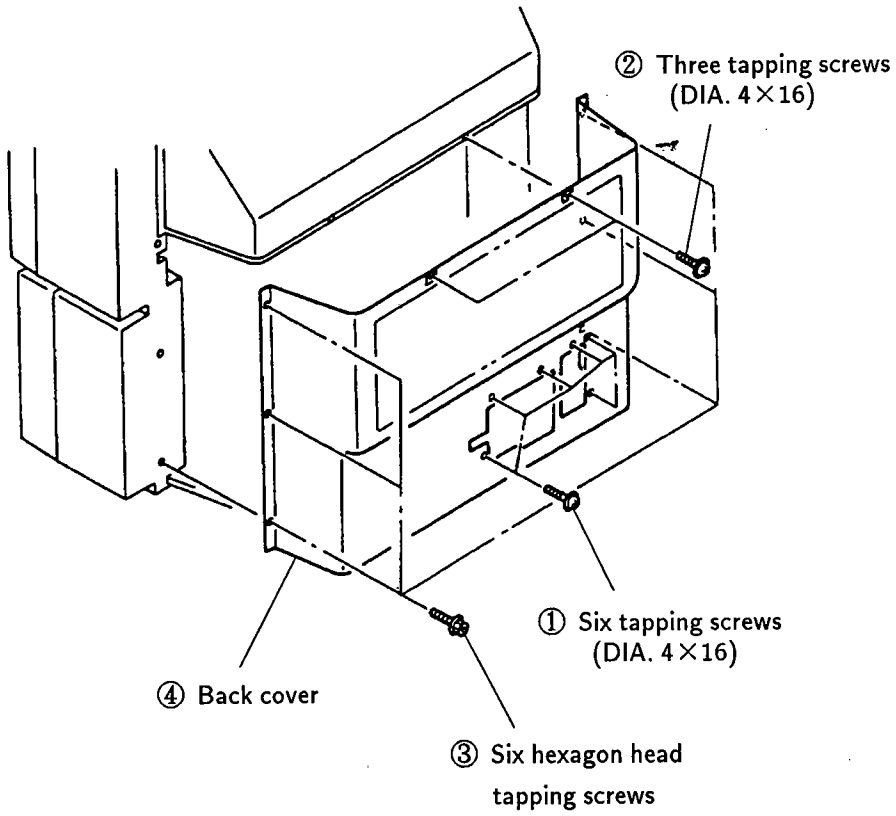
2-3-2. SCREEN FRAME REMOVAL (KP-61 XBR 28 only)



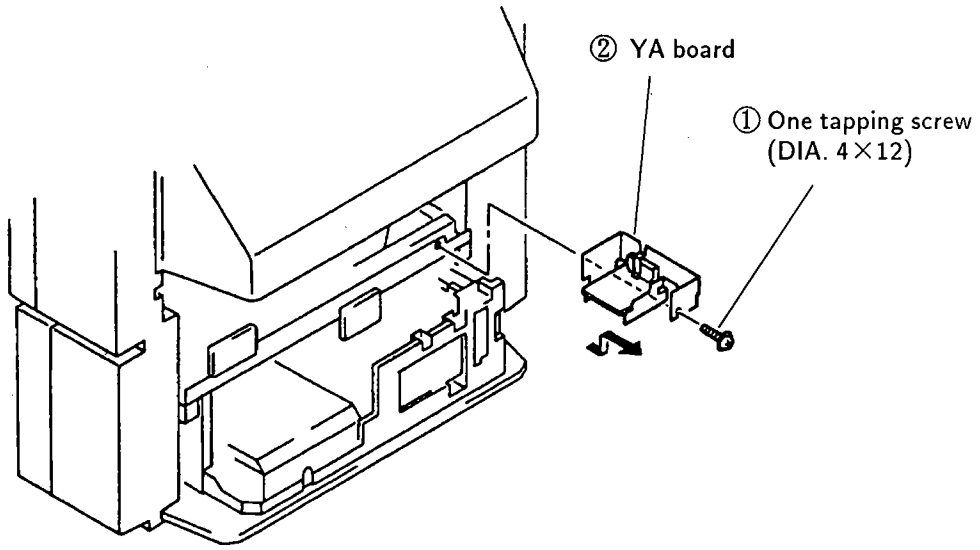
2-4. D BOARD REMOVAL



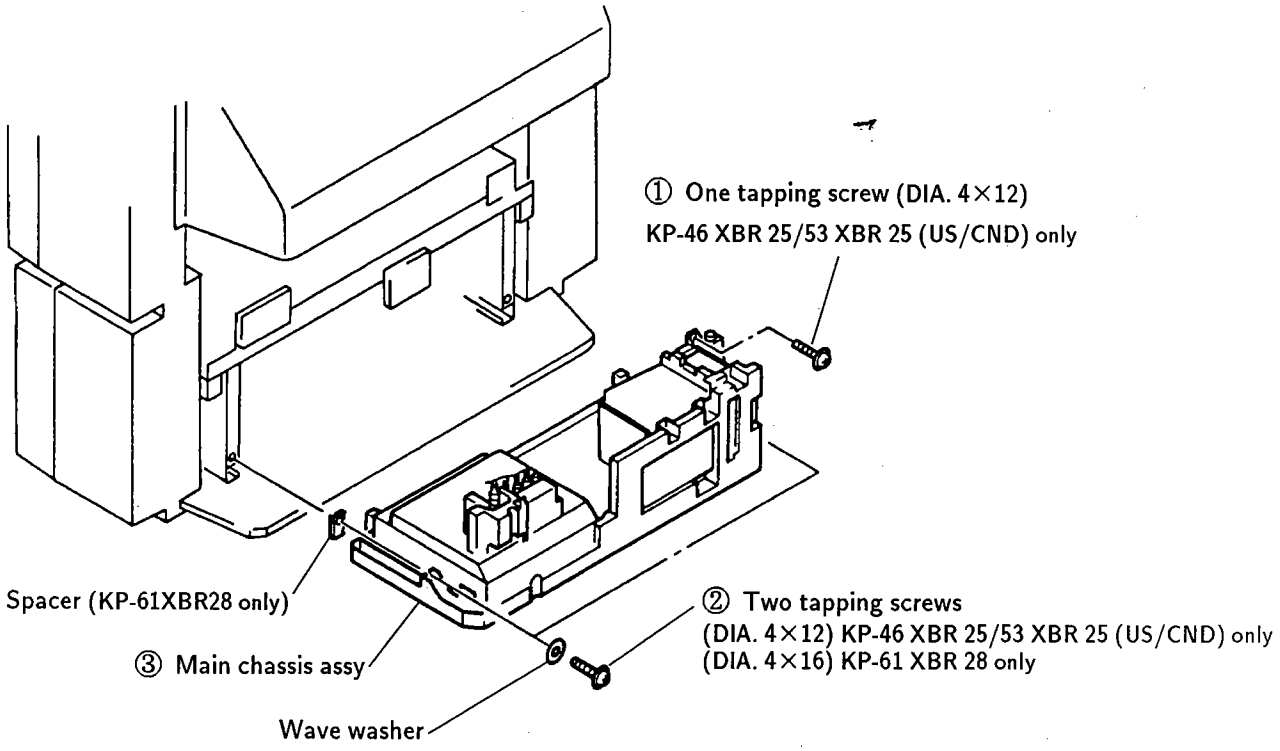
2-5. BACK COVER REMOVAL



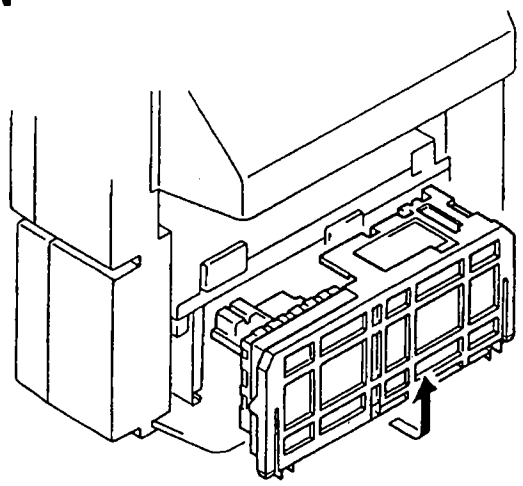
2-6. YA BOARD REMOVAL



2-7. MAIN CHASSIS ASSY REMOVAL


① One tapping screw (DIA. 4×12)
KP-46 XBR 25/53 XBR 25 (US/CND) only
Spacer (KP-61XBR28 only)
② Two tapping screws
(DIA. 4×12) KP-46 XBR 25/53 XBR 25 (US/CND) only
(DIA. 4×16) KP-61 XBR 28 only
③ Main chassis assy
Wave washer

2-8. SERVICE POSITION



NOTES INSERTED IN SERVICE POSITION SECTION

Service Position Procedure

(1) Remove the path locks where the harness comes into.
(MAIN bracket, G shield)

(2) Remove the following connectors before removing the main bracket.
* HV grounding lead, G shield grounding lead, uT35 grounding lead (uT board), V-2 connector (V board).

(3) Remove the main bracket. (Take care as the connector leads linking to the C and Z boards are considerably short.)
(MAIN bracket, G shield)

(4) When pulling out the main bracket with power ON, be sure to connect the connectors removed.
* HV grounding lead, G shield grounding lead, uT35 grounding lead (uT board).

In case that grounding lead (Black) of HV Block is not connected with chassis grounding, it causes arcing of CRT and it is dangerous.

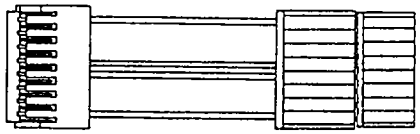
Be sure to connect grounding lead of HV Block with chassis grounding.

CONNECTOR CABLES

※ **In order to put the set in the service position, use the extension connector cables below.**

Parts No.	Connection
1-941-897-38	CB-4 (G-4)

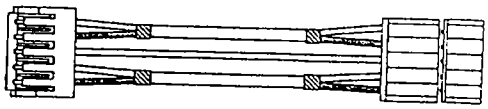
1 : Brown
2 : —
3 : —
4 : Yellow
5 : Green
6 : —
7 : —
8 : Gray



White L=140 White

Parts No.	Connection
1-941-897-43	CR-15 (A-15)

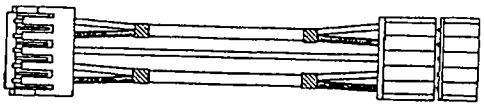
1 : White/Gray
2 : Gray/Shield
3 : Orange
4 : Red/Gray
5 : Gray/Shield



Red L=180 Red

Parts No.	Connection
1-941-897-39	CG-16 (A-16)

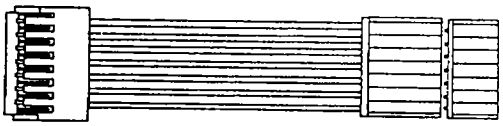
1 : White/Gray
2 : Gray/Shield
3 : Orange
4 : Red/Gray
5 : Gray/Shield



Yellow L=110 Yellow

Parts No.	Connection
1-941-897-44	ZR-1 (D-1)

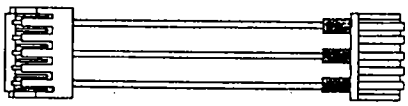
1 : Brown
2 : Red
3 : Orange
4 : Yellow
5 : Green
6 : Blue
7 : Violet



White L=150 White

Parts No.	Connection
1-941-897-40	ZG-19 (A-19)

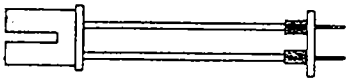
1 : Green
2 : —
3 : Black
4 : —
5 : Brown



White L=150 White

Parts No.	Connection
1-941-897-45	A-21 (CRT BRACKET)

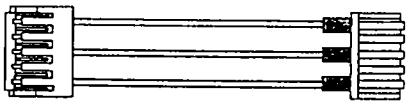
1 : Black
2 : Black



White L=40 White

Parts No.	Connection
1-941-897-41	ZR-18 (A-18)

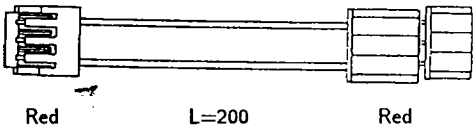
1 : Red
2 : —
3 : Black
4 : —
5 : Brown



White L=150 White

Parts No.	Connection
1-941-897-46	V-2 (ZR-3)

1 : Brown
2 : —
3 : Red



Red L=200 Red

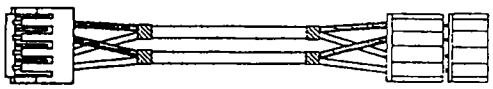
Parts No.	Connection
1-941-897-42	ZG-2 (D-2)

1 : —
2 : Red
3 : Orange
4 : Yellow
5 : Green
6 : Blue
7 : Violet
8 : Gray

White L=130 White

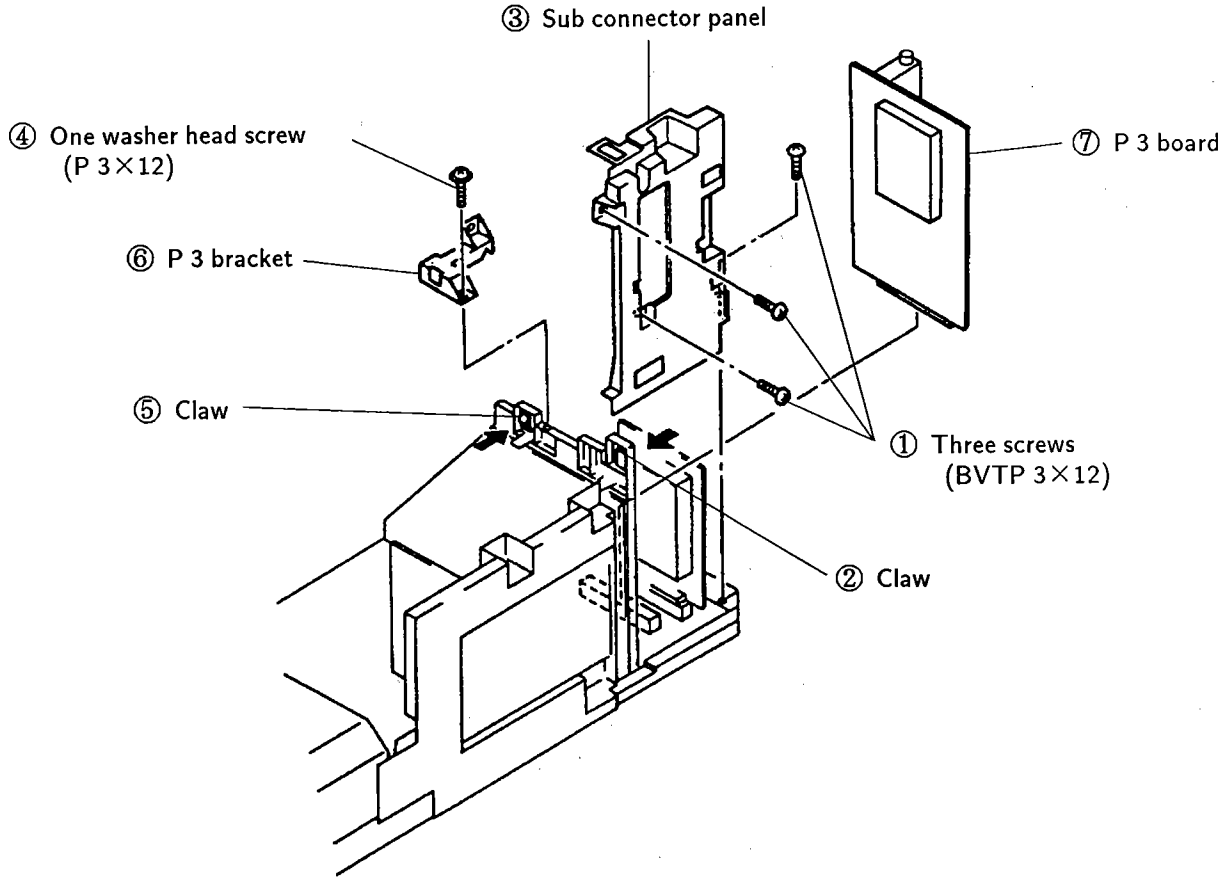
Parts No.	Connection
1-941-897-47	A-3 (YG-3)

1 : Red
2 : White
3 : Gray/Shield
4 : Black

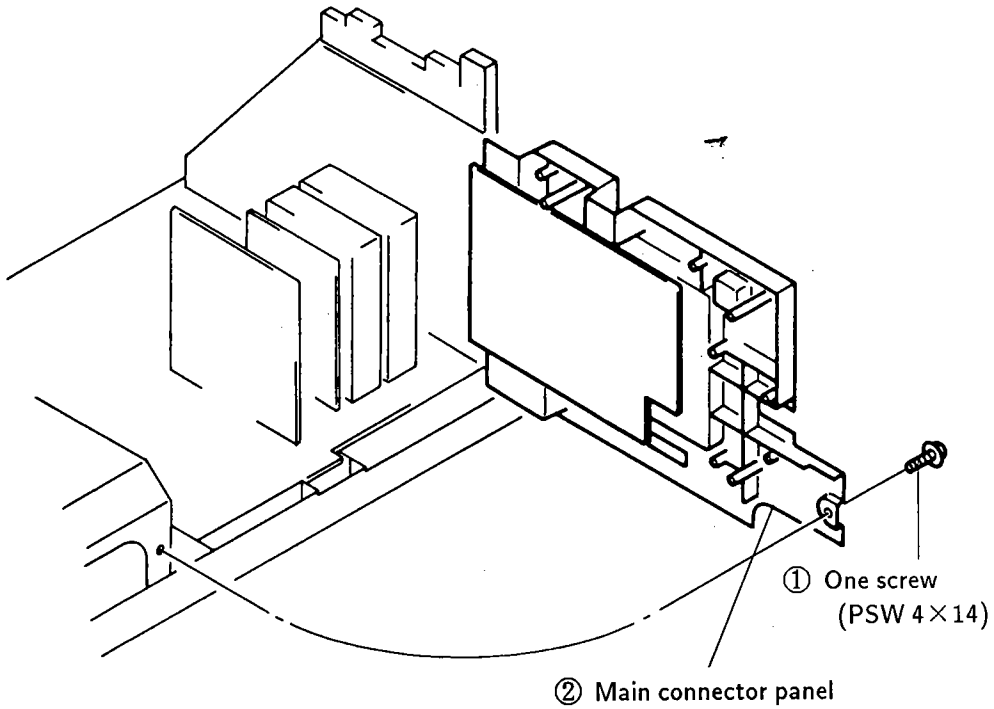


Red L=100 Red

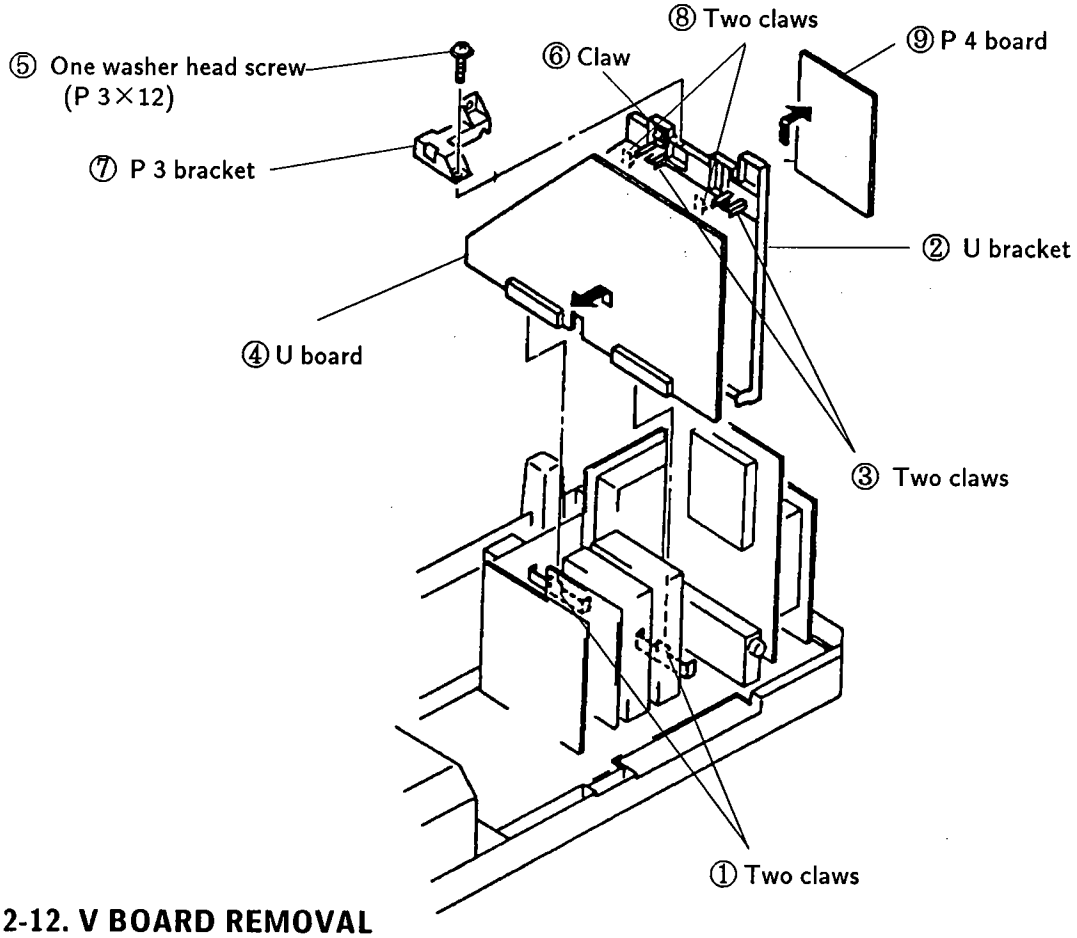
2-9. P 3 BOARD REMOVAL



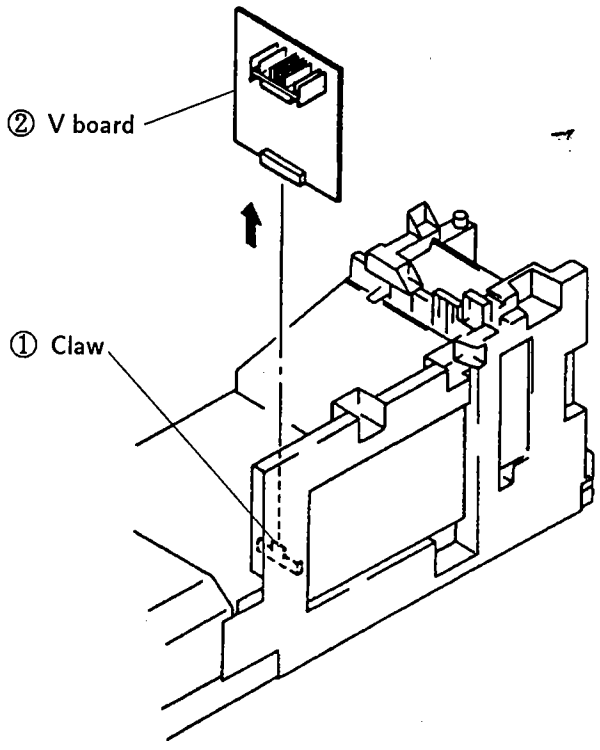
2-10. MAIN CONNECTOR PANEL REMOVAL



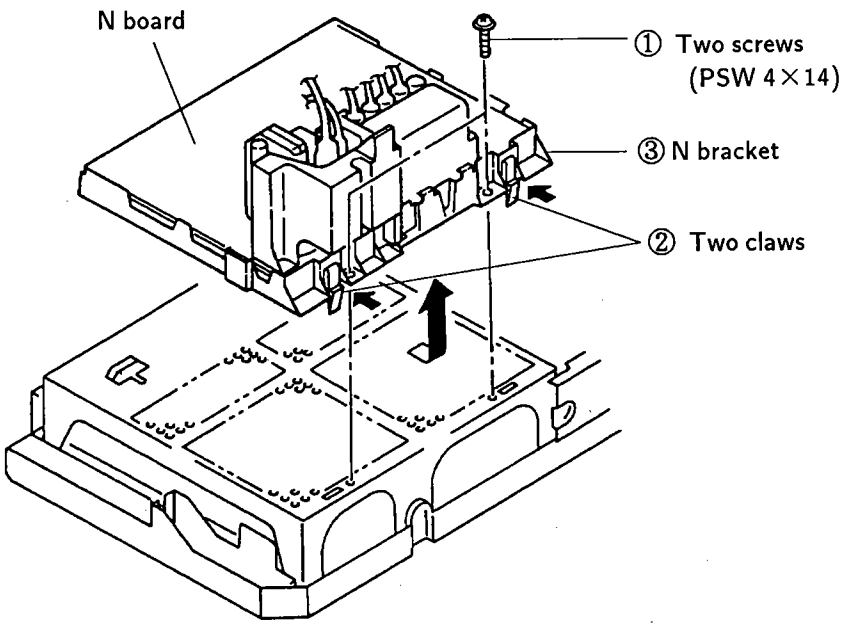
2-11. U AND P 4 BOARDS REMOVAL



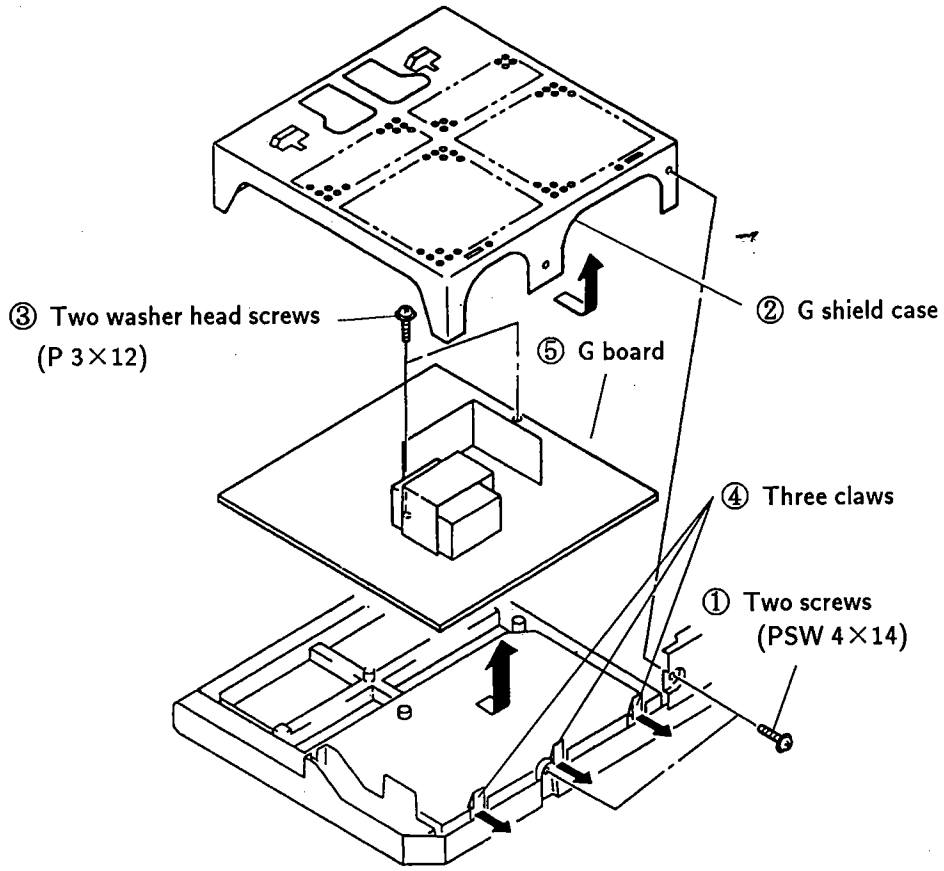
2-12. V BOARD REMOVAL



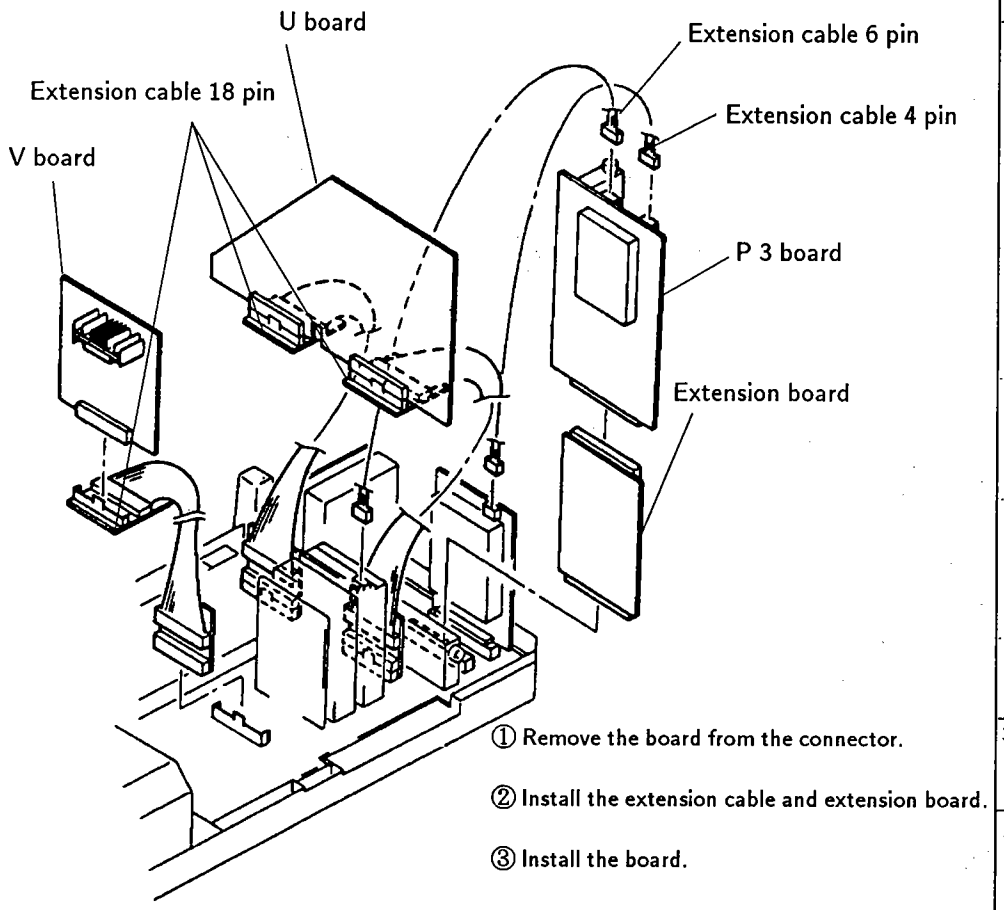
2-13. N BRACKET REMOVAL

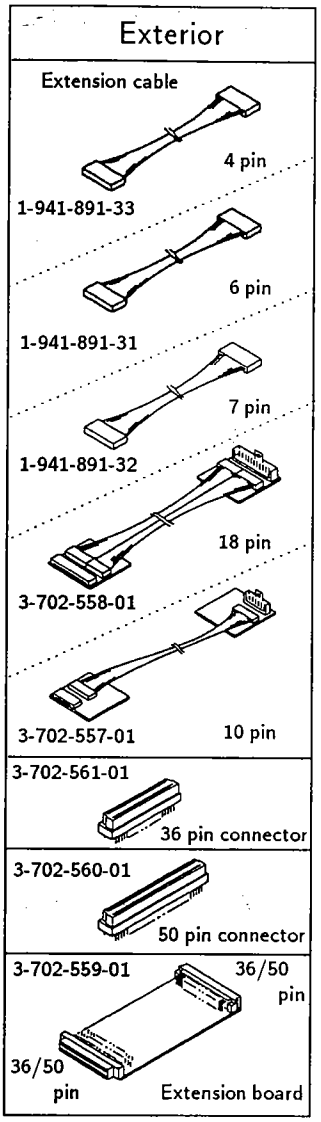


2-14. G BOARD REMOVAL

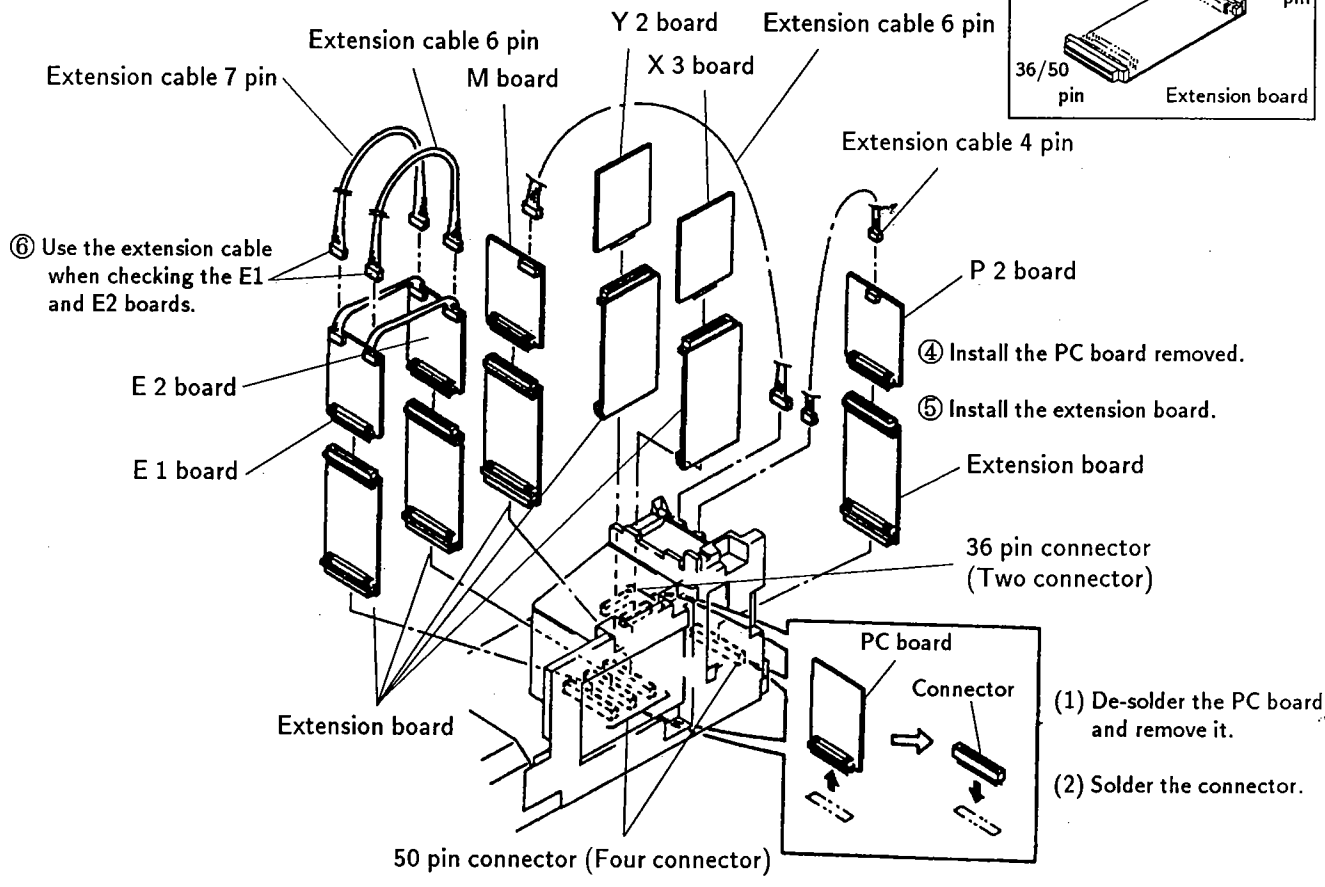


2-15-1. CONNECTOR CABLE

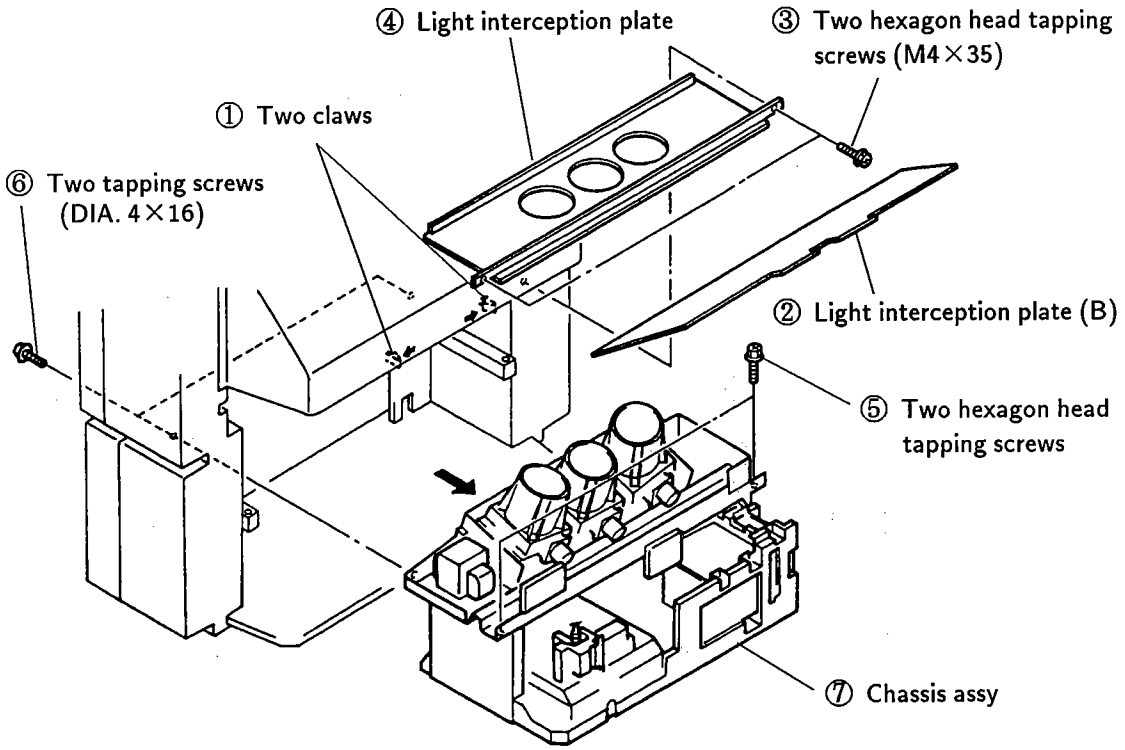

U board
Extension cable 18 pin
V board
Extension cable 6 pin
Extension cable 4 pin
P 3 board
Extension board
① Remove the board from the connector.
② Install the extension cable and extension board.
③ Install the board.



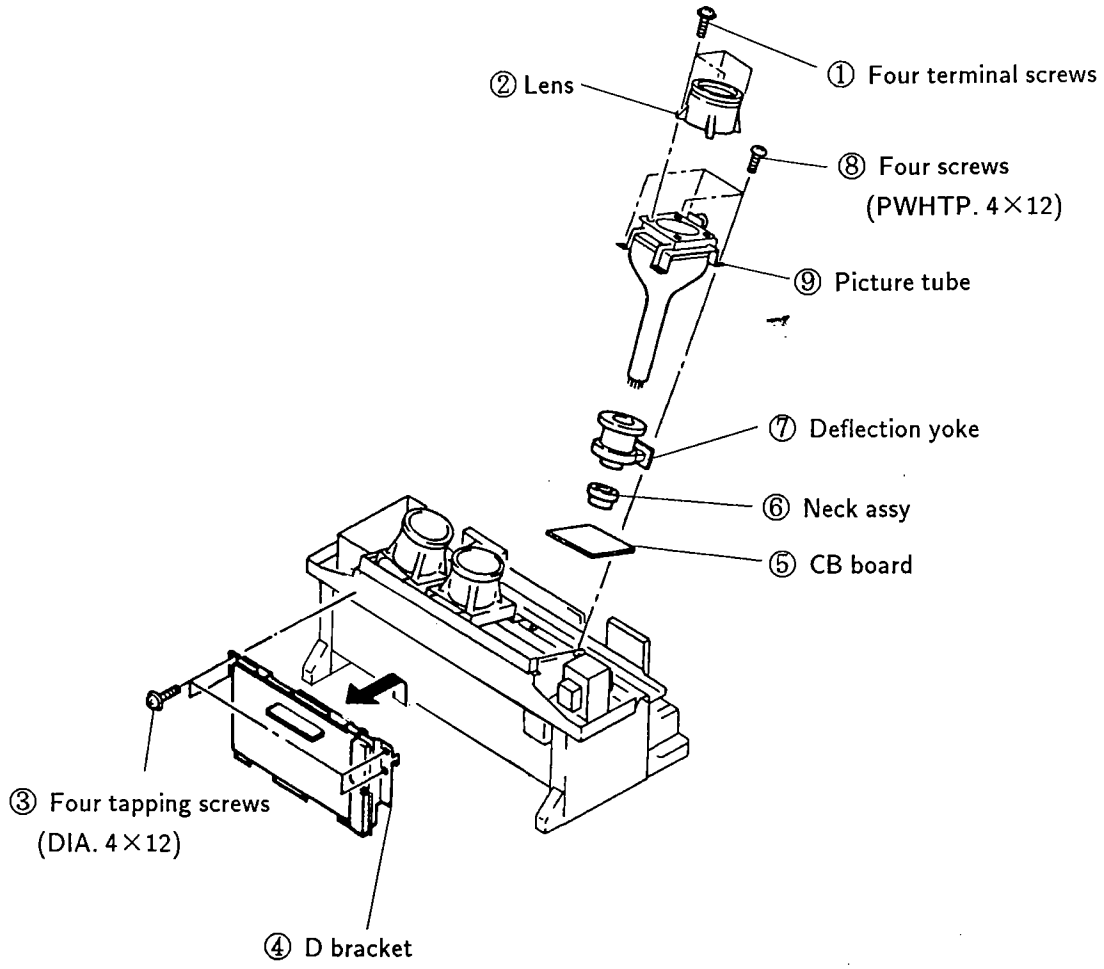
2-15-2. CONNECTOR CABLE


Extension cable 7 pin
Extension cable 6 pin
M board
Y 2 board
X 3 board
Extension cable 6 pin
Extension cable 4 pin
⑥ Use the extension cable when checking the E1 and E2 boards.
E 2 board
E 1 board
P 2 board
④ Install the PC board removed.
⑤ Install the extension board.
Extension board
36 pin connector (Two connector)
PC board
Connector
(1) De-solder the PC board and remove it.
(2) Solder the connector.
Extension board
50 pin connector (Four connector)

2-16. CHASSIS ASSY REMOVAL

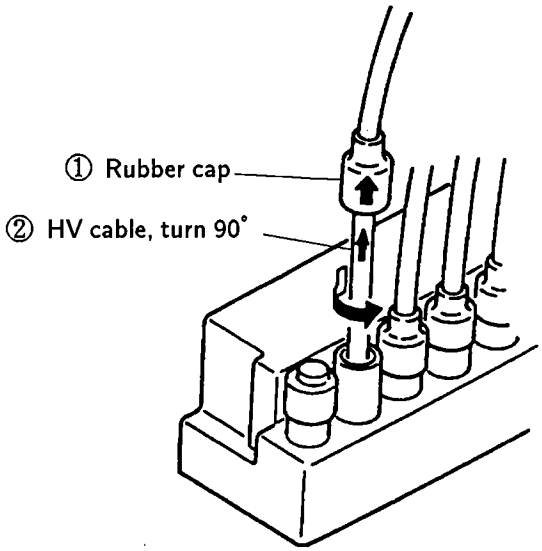

④ Light interception plate
③ Two hexagon head tapping screws (M4×35)
① Two claws
⑥ Two tapping screws (DIA. 4×16)
② Light interception plate (B)
⑤ Two hexagon head tapping screws
⑦ Chassis assy

2-17. PICTURE TUBE REMOVAL

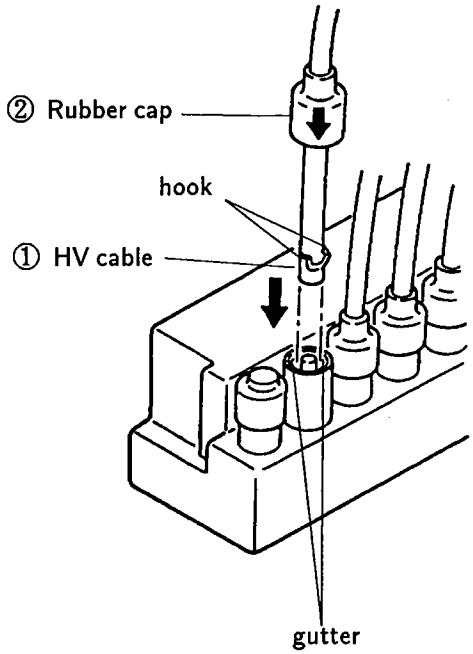


2-18. HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL

(1) Remover



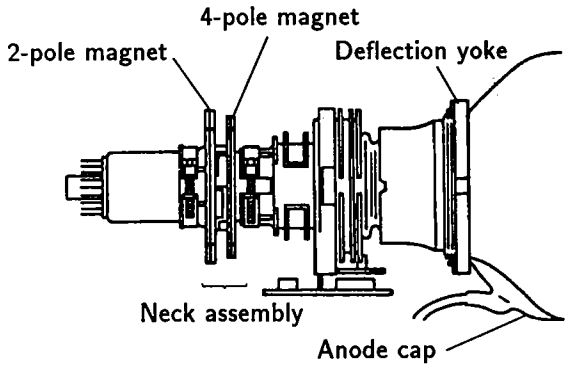
(2) Installation



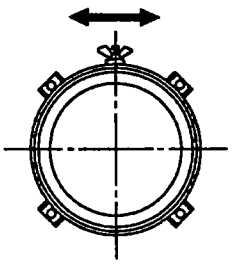
SECTION 3
SET-UP ADJUSTMENTS

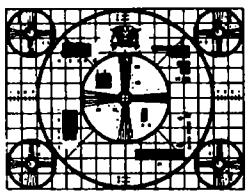
3-1. FOCUS LENS ADJUSTMENTS

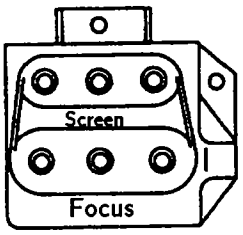
1. Set the D-board registration variable resistors (VR) to mechanical center.
2. Set the centering magnets (for red, green, and blue) to 0 as shown in the figure.



3. Input monoscope signal. Set 50% BRIGHTNESS and minimum PICTURE. Make rough adjustment so that 10IRE of the monoscope signal becomes faintly luminous using the screen VRs.
4. Set PICTURE and BRIGHTNESS maximum. Press the commander menu button. Select CONVERGENCE to display test signal.
5. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
   Similarly, select B OFF to cut off blue output.
6. Turn the green lens to eliminate flare of the test signal.

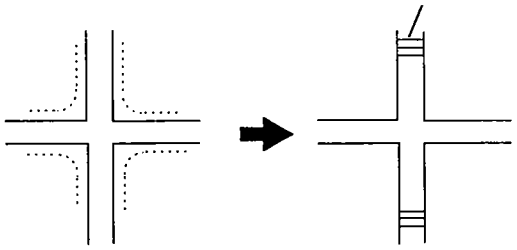




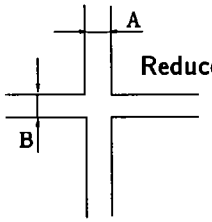


(Focus block)

Verify that scanning lines are seen.



7. Turn the green focus VR in the focus block to adjust green focus to reduce both A and B of the test signal to minimum.



Reduce both A and B to minimum.

8. Repeat avobe 6 and 7. Couple of times to improve tracking and obtain an optimum focus. Then tighten the green lens screw.
9. Adjust the red and blue focuses similarly.

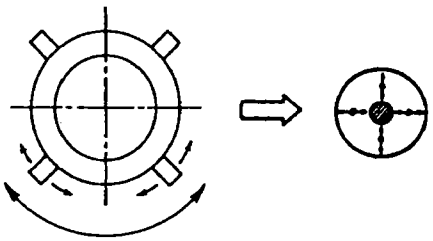
3-2. DEFLECTION YOKE POSITION ADJUSTMENTS

1. Input monoscope signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
   Similarly, select B OFF to cut off blue output.
3. Loosen the deflection yoke (DY) fitting screws. Tilt the DY to obtain the best horizontal and vertical monoscope patterns.
4. After adjustment, press the DY onto the cathode-ray tube (CRT) funnel and tighten the screws.
5. Also adjust DY positions for red and blue outputs in the same way.

3-3. 2-POLE MAGNET ADJUSTMENT

1. Input dot signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
   Similarly, select B OFF to cut off blue output.
3. Set PICTURE to maximum. Turn the green focus variable resistor (VR) in the focus block counterclockwise from the just focus to brighten the point in the dot.
4. Adjust the 2-pole magnet to position the bright point at the center of the dot.
5. Adjust the red and blue dots in the same way.

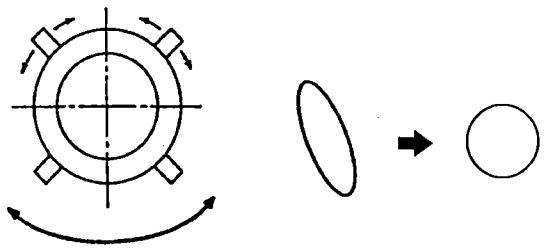
* Use the center dot:red and green
  Use the vertical center and left end dot :blue



3-4. 4-POLE MAGNET ADJUSTMENT

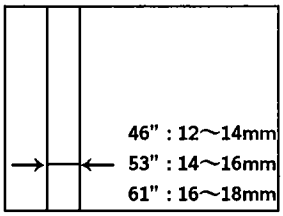
1. Input dot signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
   Similarly, select B OFF to cut off blue output.
3. Set PICTURE to maximum. Turn the green focus variable resistor (VR) in the focus block clockwise (count clockwise:blue)from the just focus until the dot diameter becomes as shown below.
4. Adjust the 2-pole magnet to make the dot perfectly round.
5. Turn the green focus variable resistor to the just focus.
6. Adjust the red and blue dot in the same way.

* Use the center dot : red and green
  Use the vertical center and left end dot : blue



3-5. DE-FOCUS ADJUSTMENT (BLUE)

1. Input cross hatch signal.
2. Turn the blue focus variable resistor (VR) in the focus block counter clock wise so that thewidth of the left end vertical line becomes as shown below.

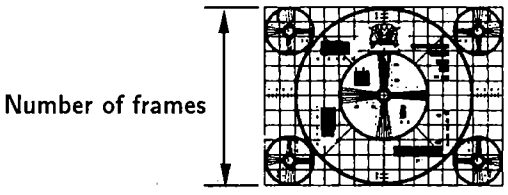


without flare

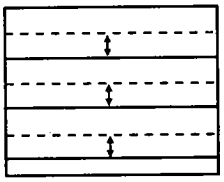
3-6. GREEN PICTURE ADJUSTMENTS

1. Input monoscope signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
   Similarly, select B OFF to cut off blue output.
3. Turn RV913 and RV960, the vertical green linearity variable resistors (V.G LIN VRs) on the D-board, to obtain an optimum vertical linearity. Then turn RV911, the vertical green amplitube variable resistor (V.G SIZE VR) to set vertical amplitude to 11.7 flames.

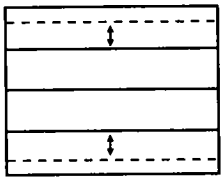
   Note: The vertical position indicator of the monoscope signal must be positioned at the center by adjusting RV905, the vertical green center position variable resistor (V.G CENT VR) in advance.



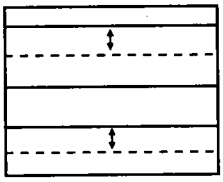
Monoscope signal



RV905 V.G CENT
(vertical position)

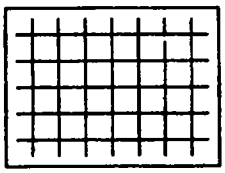


RV911 V.G SIZE
(vertical amplitude)

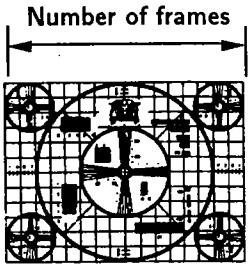


RV913 V.G LIN
(vertical linearity)

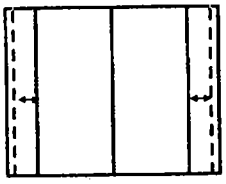
5. Verify that the horizontal lines on the top and bottom of cross-hatched area of the monoscope signal are horizontal and linear.



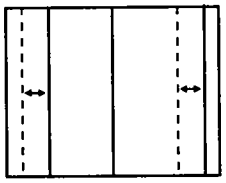
6. Turn RV916, RV964 and RV969, the horizontal green linearity variable resistors (H.G LIN VRs) on the D-board, to obtain an optimum horizontal linearity.
   Then turn RV908, the horizontal green amplitude variable resistor (H.G SIZE VR) to set horizontal amplitude to 15.6 frames.
   Note: The horizontal position indicator of the monoscope signal must be positioned at the center by adjusting RV902, the horizontal green center position variable resistor (V.G CENT VR) in advance.



Monoscope signal



RV908 H.G SIZE
(horizontal position)



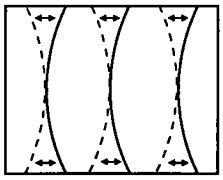
RV916 H.G LIN
(horizontal linearity)

7. Input cross hatch signal.
   Turn vertical green (V.G) and horizontal green (H.G) variable resistors (VRs) and make adjustments according to the following steps :

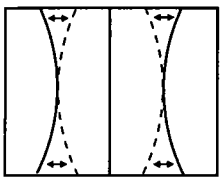
(Adjustment procedure)

1. [BOW] → [SKEW] → [CENT (center position)]
2. [PIN (pin warp)] → [SUB BOW] → [BOW]
3. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
4. [M.WAVE (middle sine wave warp)] → [WAVE-A (upper and lower sine wave warp)] → [WAVE-U (upper sine wave warp)]
   ※ For vertical (V) only.
5. [V-M.PIN (vertical middle pin warp)] → [V/WING (vertical wing warp)]
   ※ For vertical (V) only.
6. [H-M.PIN (horizontal middle pin warp)]
   ※ For horizontal (H) only.

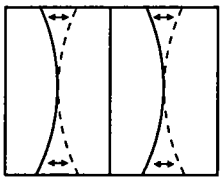
(Dot motion)



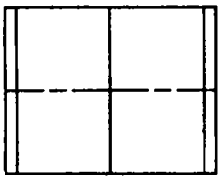
RV932 H.G BOW
(horizontal green bow)



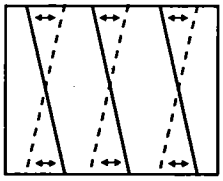
RV941 H.G PIN
(horizontal green pin warp)



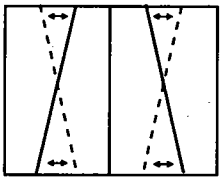
RV950 H.G SUB BOW
(horizontal green sub bow)



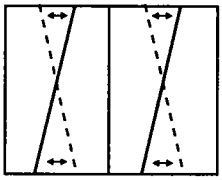
V.G BOW·····RV935
V.G PIN·····RV938
V.G SUB BOW·····RV953



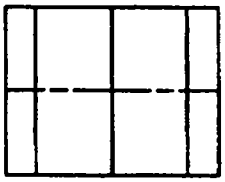
RV920 H.G SKEW
(horizontal green skew)



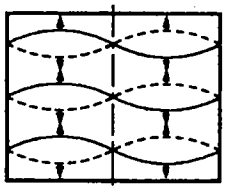
RV925 H.G KEYS
(horizontal green trapezoid)



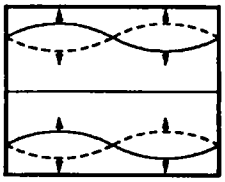
RV944 H.G SUB SKEW
(horizontal green sub skew)



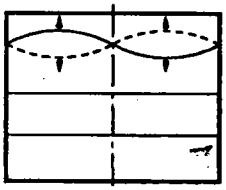
V.G SKEW·····RV923
V.G KEYS·····RV929
V.G SUB SKEW·····RV947



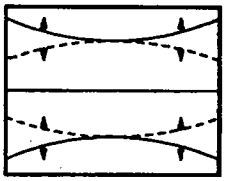
RV962 V-M-WAVE
(vertical middle sine wave warp)



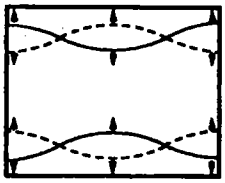
RV975 V-WAVE-A
(vertical upper and lower sine wave warp)



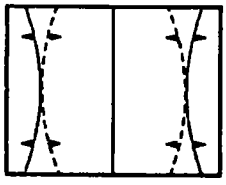
RV978 V-WAVE-U
(vertical upper sine wave warp)



RV980 V-M. PIN
(vertical middle pin warp)
※ Common in red, green, and blue



RV957 V/WING
(wing warp)
※ Common in red, green, and blue



RV956 H/M. PIN
(horizontal middle pin warp)

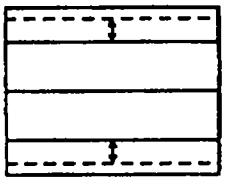
3-7. GREEN AND RED REGISTRATION ADJUSTMENTS

1. Input cross hatch signal.
2. Enter service mode. Select B OFF of SERVICE MODE to cut off blue output.
3. Turn the vertical red (V.R) and horizontal red (H. R) variable resistors (VRs) to adjust red picture convergence in relation to green picture according to the following steps :

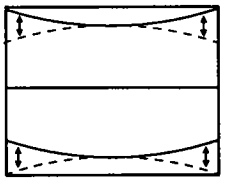
(Adjustment procedure)

1. [LIN (linearity)] → [SIZE (amplitude)] → [CENT (center position)]
2. [BOW] → [SKEW] → [CENT (center position)]
3. [PIN (pin warp)] → [SUB BOW] → [BOW] [H/M. PIN (horizontal middle pin warp)]
4. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
5. [M.WAVE (middle sine wave warp)] → [WAVE-A (upper and lower sine wave warp)] → [WAVE-U (upper sine wave warp)]

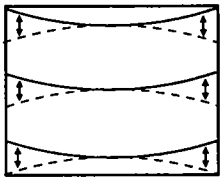
(Dot motion)



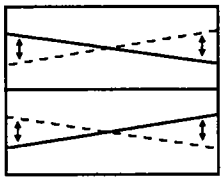
RV912 V.B SIZE
(vertical red amplitude)



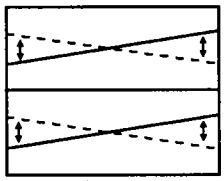
RV952 V.R SUB BOW
(vertical red sub bow)



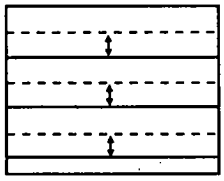
RV943 V.R BOW
(vertical red bow)



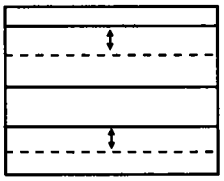
RV928 V.R KEYS
(vertical red trapezoid)



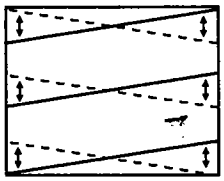
RV946 V.R SUB SKEW
(vertical red sub skew)



RV904 V.R CENT
(vertical red center position)



RV917 V.R LIN
(vertical red linearity)



RV922 V.R SKEW
(vertical red skew)

H.R LIN·····RV915
H.R SIZE·····RV907
H.R CENT·····RV901
H.R BOW·····RV931
H.R SKEW·····RV919
H.R PIN·····RV940
H.R KEYS·····RV926
H.R SUB BOW·····RV949
H.R SUB SKEW·····RV943
V-M-WAVE·····RV973
V-WAVE-A·····RV976
V-WAVE-U·····RV979
V-M.PIN·····RV980
V/WING·····RV957
H/M.PIN·····RV956

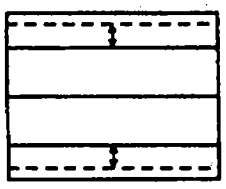
3-8. GREEN AND BLUE REGISTRATION ADJUSTMENTS

1. Input cross hatch signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
3. Turn the vertical blue (V.B) and horizontal blue (H.B) variable resistors (VRs) to adjust blue picture convergence in relation to green picture according to the following steps :

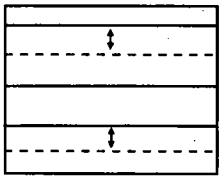
(Adjustment procedure)

1. [LIN (linearity)] → [SIZE (amplitude)] → [CENT (center position)] →
2. [BOW] → [SKEW] → [CENT (center position)]
3. [PIN (pin warp)] → [SUB BOW] → [BOW] [H/M. PIN (horizontal middle pin warp)]
4. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
5. [M.WAVE (middle sine wave warp)] → [WAVE-A (upper and lower sine wave warp)] → [WAVE-U (upper sine wave warp)] →

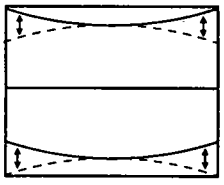
(Dot motion)



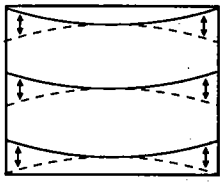
RV912 V.B SIZE
(vertical blue amplitude)



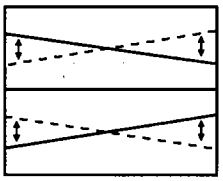
RV918 V.B LIN
(vertical blue linearity)



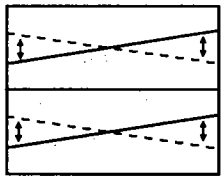
RV954 V.B SUB BOW
(horizontal blue sub bow)



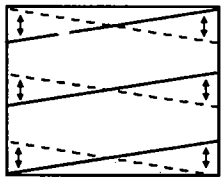
RV936 V.B BOW
(vertical blue bow)



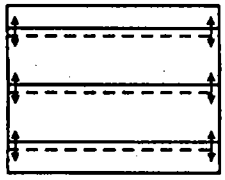
RV930 V.B KEYS
(vertical blue trapezoid)



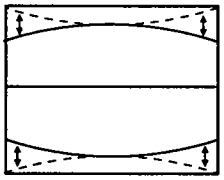
RV948 V.B SUB SKEW
(vertical blue sub skew)



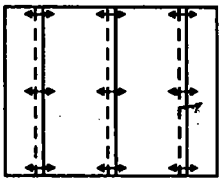
RV924 V.B SKEW
(vertical blue skew)



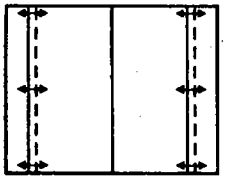
RV906 V.B CENT
(vertical blue center position)



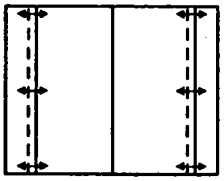
RV939 V.B PIN
(vertical blue pin warp)



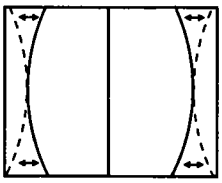
RV903 H.B CENT
(vertical blue center position)



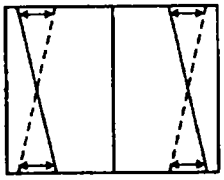
RV909 H.B SIZE
(horizontal blue amplitude)



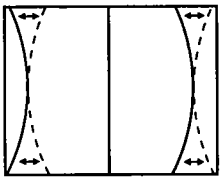
RV914 H.B LIN
(horizontal blue linearity)



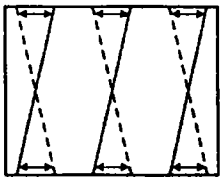
RV942 H.B PIN
(horizontal blue pin warp)



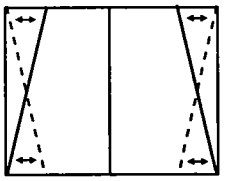
RV954 H.B SUB SKEW
(horizontal blue sub skew)



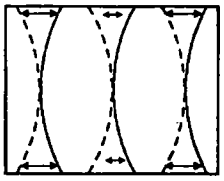
RV951 H.B SUB BOW
(horizontal blue sub bow)



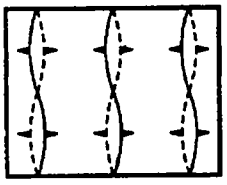
RV921 H.B SKEW
(horizontal blue skew)



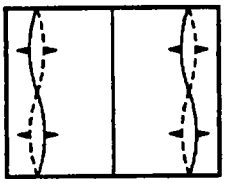
RV927 H.B KEYS
(horizontal blue trapezoid)



RV933 H.B BOW
(horizontal blue bow)



RV981
※ Common in red, green, and blue



RV982
※ Common in red, green, and blue

H/M PIN·····RV958
M.WAVE·····RV961
WAVE-A·····RV974
WAVE-U·····RV977

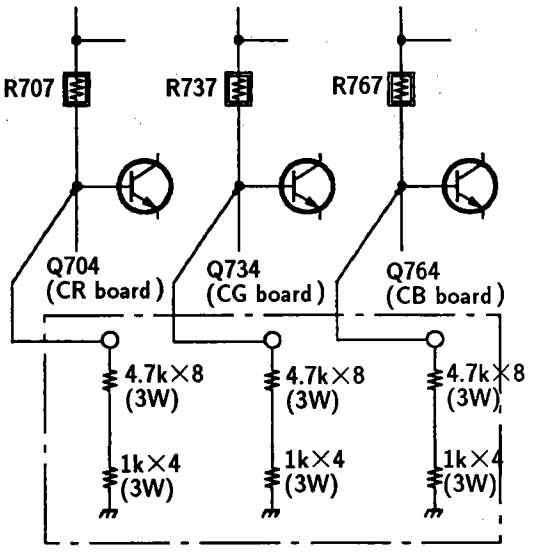
3-9. REGISTRATION CHECK

1. Out put red, blue, and green.
2. Out put cross hatch and monoscope signals to check registration. Also check focus.

3-10. WHITE BALANCE ADJUSTMENTS

1) Screen adjustment

1. Input white signal.
2. Remove connectors CR-15, CG-16, and CB-17.
3. Fit jigs between the ground and R707, R737, and R767.



※ Resistors in each jig are connected serial.

4. Turn the RGB (red, green, and blue) screen variable resistors in the focus block to make the flyback line faint. Stop before the line completely disappears.
5. Insert connectors CR-15, CG-16, and CB-17.

2) White balance adjustments (SBRT, GAMP, BAMP, GCUT, BCUT)

1. Input monoscope signal and enter service mode.
2. Select the picture quality adjustment from the menu and set PICTURE minimum.
3. Use the commander to adjust SBRT so that 10 IRE of the monoscope pattern becomes faintly luminous.
4. Input white signal.
5. Set PICTURE minimum. Adjust item GCUT and BCUT to obtain an optimum white balance.
6. Set PICTURE maximum. Adjust GAMP and BAMP to obtain an optimum white balance.
7. Repeat white balance adjustment alternating PICTURE setting at the minimum and maximum.

MEMO

SECTION 4

SAFETY RELATED ADJUSTMENTS

4-1. SAFETY RELATED ADJUSTMENTS

When replacing the following components, make the HV REGULATOR adjustments (on the N board)

◪……HV block, IC803, IC805, D805, D807, C817, C818, C821, C836, C837, R824, R825, R827, R828, R834,R835, R836, R864, R865, R866, R902

When replacing the following components, make the HV HOLD DOWN adjustments (on the N board)

◪……HV block, IC803, IC804, Q804, D806, D808, C809, C819, C820, C822, C823, C850, R807, R826, R829, R832, R833, R837, R838, R839, R840, R841, R892, R893, R900, R901

When replacing the following components, make the BEAM CURRENT PROTECTOR adjustments (on the N board)

◪……① IC802, Q805, Q807, D811, D812,C810, C824, C825, C826, C827, C831, R810, R843, R844, R847, R848, R849, R850, R851, R852, R853, R854, R881

② IC804, Q804, Q808, D808, D809, C809, C828,C829, C830, C831, R807, R839, R840, R841,R847, R848, R849, R850, R851, R852, R855, R856, R857, R881

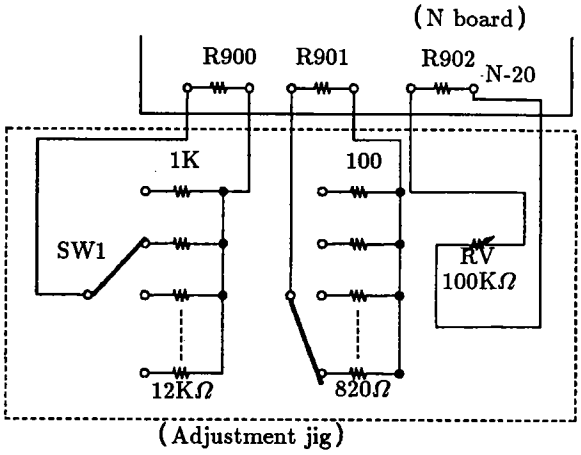
When replacing the following components, make the OVP CIRCUIT adjustments (on the G board)

◪……Q618, Q621, D628, C634, R639, R649, R652, R655, R656

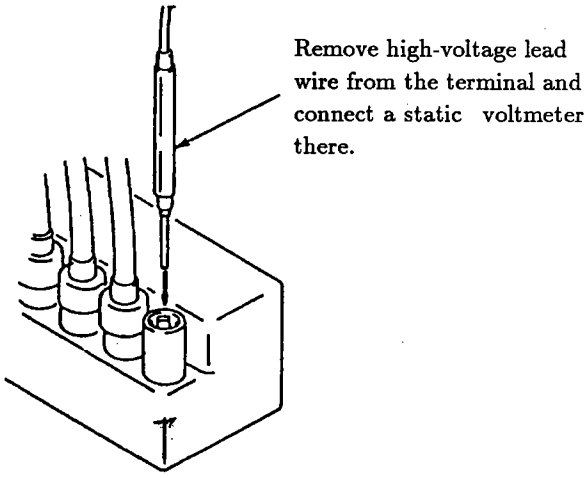
— Checking with static voltmeter —

HV HOLD DOWN ADJUSTMENTS (⊠R900, R901)

1. Verify that the power switch is off.
2. Connect the HV hold down adjustment resistance jig to the N20 connector on the N board.



3. Connect an external variable resistor (RV) to R 902 of the N board.
4. Remove the cap off from the unused terminal of the high voltage block. Connect a static voltmeter to the terminal.

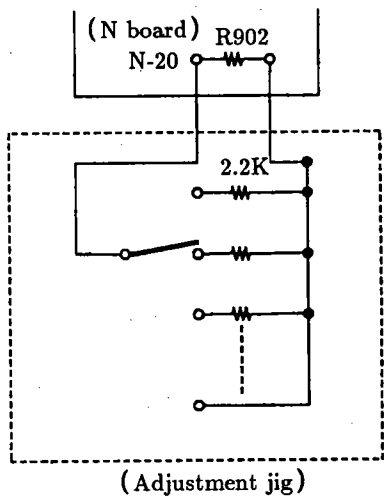


5. Receive 120 VAC power voltage and monoscope pattern signal. Maximize PICTURE and BRIGHTNESS.
6. Use the external variable resistor of the hold down adjustment jig to make the static voltmeter to read 33.50 ± 0.50kVDC.
7. Raise resistances with the jig until the HV hold down circuit is activated. Read the figures then, and mount resistance of the measured figures to R900 and R901.
   R900 : Must be 1kΩ to 12kΩ
   R901 : Must be Jw 100Ω to 820Ω
8. Turn on power again. Vary external variable resistance and confirm that the HV hold down circuit is activated at the reated value, 33.50± 0.50kV.

KP-46XBR25/53XBR25/61XBR28 RM-Y114A

HV REGULATOR ADJUSTMENTS (R902)

1. Connect the HV adjustment resistance jig to R902 of the N board.



(Adjustment jig)

2. Remove the red anode lead wire for the CRT tube from the high-voltage block and connect the static voltmeter instead.
3. Receive 120 VAC power voltage and monoscope pattern signal. Set PICTURE and BRIGHTNESS to the standard.
4. Turn on power. To adjust the resistance of R902 with the adjustment jig to read the rated value, 31.50±0.50kV.
5. Receive all-white signal. Set BRIGHTNESS to the standard. Maximize PICTURE. Confirm that the rated value, 31.50±0.50kV is read.
6. Cut off RGB by R OFF, G OFF, B OFF of the service commander. Verify that the rated value, 31.50±0.50kV, is read.

+B VOLTAGE CONFIRMATION

1. Receive 120±1 VAC power voltage and monoscope pattern signal. Set BRIGHTNESS to standard and maximize PICTURE.
2. Connect a digital multimeter between the 115V line and the ground on the G board, and confirm that the rated value, 115.0$^{+2.0}_{-3.0}$V is read.

CHECKING AFTER REPLACING IC601

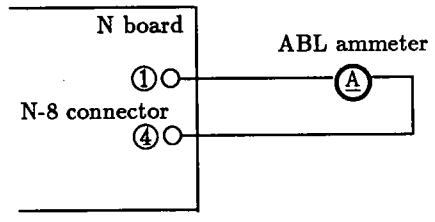
1. When replacing IC601, check the +B voltage.

CHECKING THE OVP (overvoltage protection) CIRCUIT (R652)

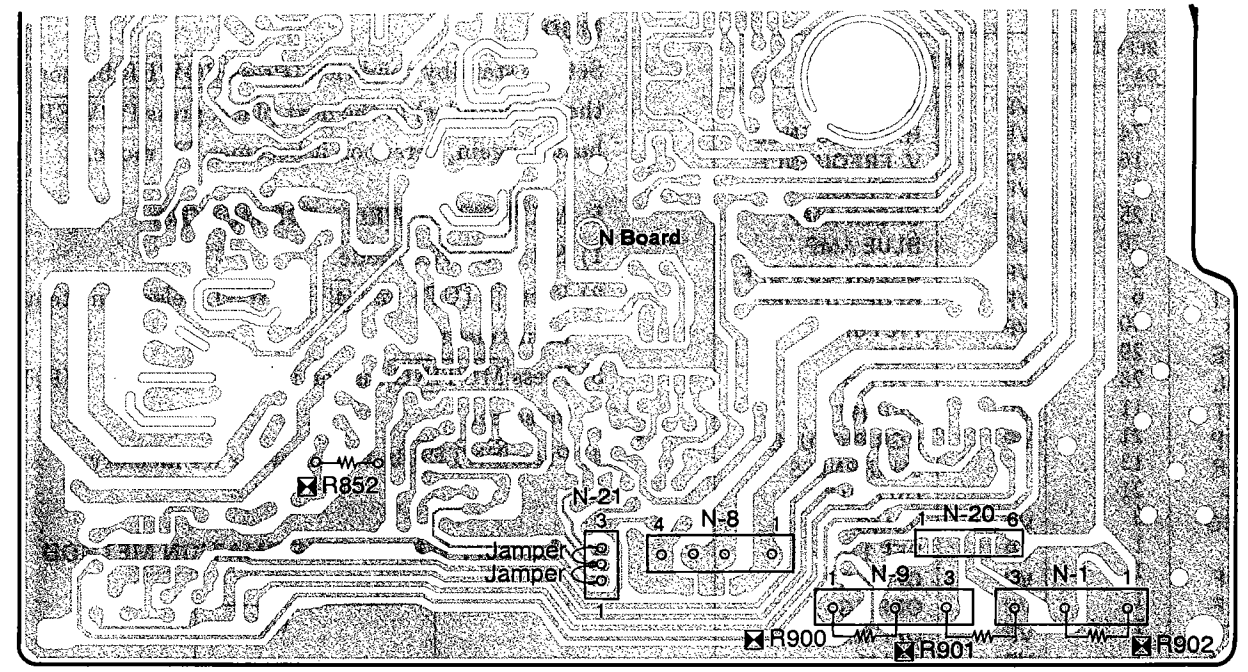
1. Receive 120 VAC power voltage and monoscope pattern signal. Maximize PICTURE and BRIGHTNESS.
2. Remove R638 from the G board and connect a variable resistor (4.7 to 10kΩ) instead.
3. Turn the variable resistor of 10kΩ and confirm that the OVP circuit is activated and luster disappears when +B voltage reads the rated value, 125.0±5.0 VDC.

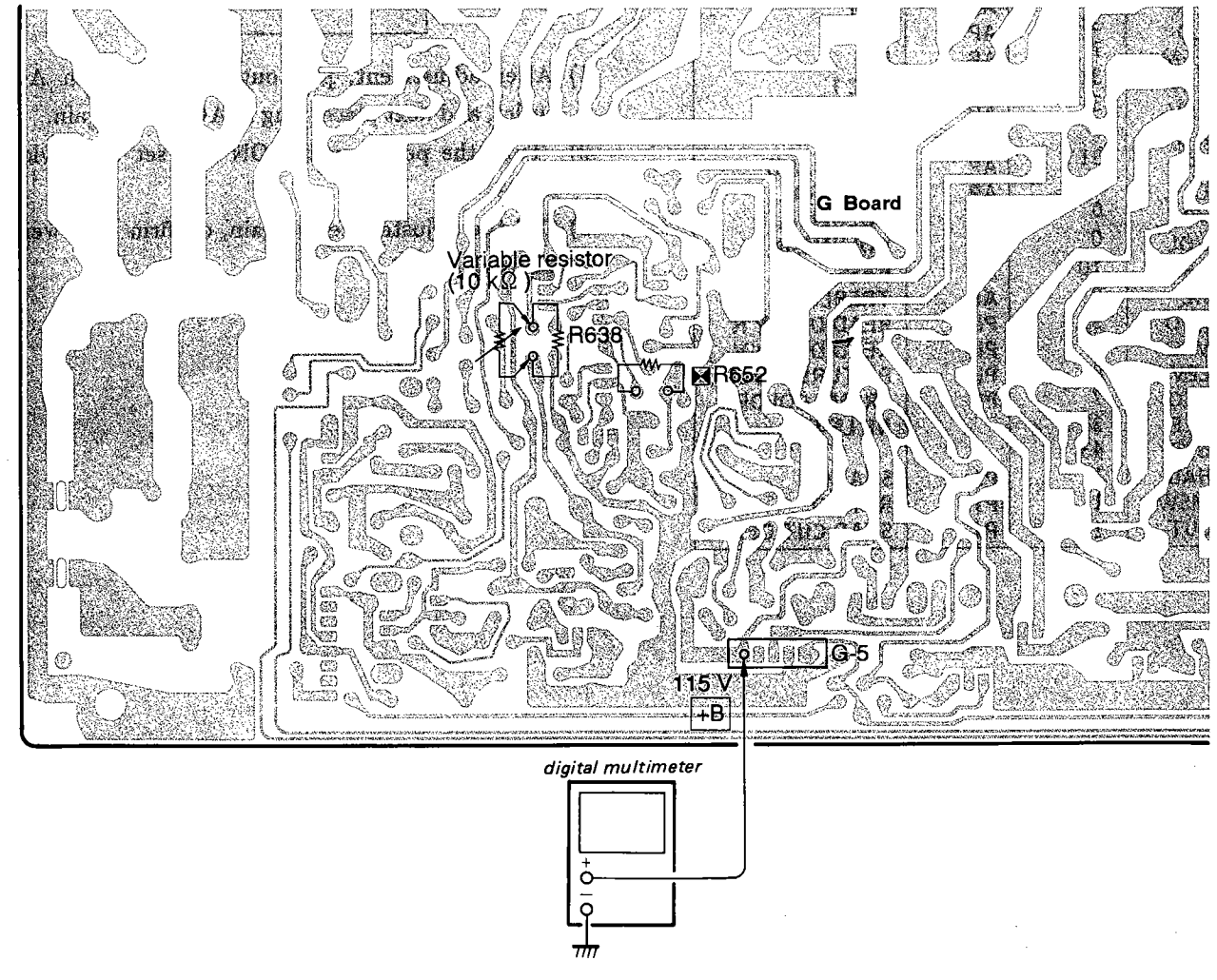
BEAM CURRENT PROTECTOR CHECK (R852)

1. Receive 120 VAC power voltage and monoscope pattern signal. Maximize BRIGHTNESS.
2. Connect pin① and pin② of the N-21 connector. (on the N board)
3. Remove the jumper connector from the N-8 connector on the N board. Then connect an ABL ammeter between pin ① and pin ④ of the N-8 connector.



4. Raise PICTURE current gradually. Confirm that the beam current protector circuit is activated and luster disappears under the rated value, 3400 μA.
5. Connect pin③ and pin② of the N-21 connector. Verify that the protector circuit is activated and luster disappears similarly.





KP-46XBR25/53XBR25/61XBR28 RM-Y114A

3. AN ITEM OF ADJUSTMENT

ITEM	REFERENCE DATA	NAME REGIST	
AFC	0	VP	AFC 1.0
HFRE	74	VP	H. FREQUENCE
VFRE	16	VP	V. FREQUENCE
HPOS	5	VP	H. PHASE
GAMP	25	VP	GREEN AMP.
BAMP	26	VP	BLUE AMP.
GCUT	9	VP	GREEN CUT OFF.
BCUT	6	VP	BLUE CUT OFF
SPIX	40	VP	PICTURE
SHUE	29	VP	HUE
SCOL	28	VP	COLOR
SBRT	11	VP	BRIGHT
RGBP	21	VP	RGB PICTURE
SHAR	13		SHARPNESS
DISP	21		OUTPUT
VSMO	0	VP	VSMO
REF	1	VP	REF 1.0
ROFF	1	VP	OFF NR
GOFF	1	VP	OFF NG
BOFF	1	VP	OFF NB
ABLM	1	VP	ABLM
DRGB	0	VP	D RGB
TEST	0	AP	T
MPX	7	AP	ATT
FILO	31	AP	I 1
DEEM	7	AP	I 2
STEV	31	AP	OSC 1
SAPV	31	AP	OSC 2
PILO	7	AP	PILOT
SEP	31	AP	WIDE BAND
VD	7	AP	SPECTRAL
LVOL	0	AP	VOLUME-L
RVOL	0	AP	VOLUME-R
BASS	10	AP	BASS
TRE	8	AP	TREBLE
PHPO	32	PI	READ DELAY H
PVPO	8	PI	READ DELAY V
PLEV	6	PI	PICTURE LEVEL
PFCO	7	PI	FRAME COLOR
NRLE	31		NR LEVEL
DSPP	43		
SHAD	1	PJ	SHADON
VMSW	1	PJ	RS HAD
SCUT	16	PJ	SHAD CUT OFF

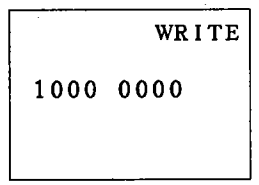
4. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press POWER button on the commander) in the next place, press POWER button again, hereupon it becomes TV mode.

5. METHOD OF WRITE FOR MEMORY

1) Set to Service Mode.
2) Press 1 (UP) and 4 (DOWN), select an item of adjustments.
3) Press MUTING button indicate WRITE (RED) on screen.
4) Press ENTER button to write for memory.

6. MEMORY WRITE CONFIRMATION METHOD



1) After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again, confirm they were adjusted.

5-2. A BOARD ADJUSTMENTS

RF AGC ADJUSTMENT(IF BLOCK VR)

1) Input a color-bar signal.
2) Adjust AGC VR of TU 101 so that snow noise and cross-modulation disappear from the picture.
3) Confirm them at every channel.

H.FREQUENCY ADJUSTMENT (HFRE)

1) Set to Service Mode.
2) Input a color-bar signal.
3) Connect a frequency counter to pin③ of A-10 connector.
4) Call the item of AFC, set to 3 level (free run).
5) Select HFRE with 1 and 4.
6) Adjust 3 and 6 to the 15735± 60 Hz level.
7) Call the item of AFC again, adjust the level" 01 ".
8) Write into the memory by pressing MUTING → then ENTER.

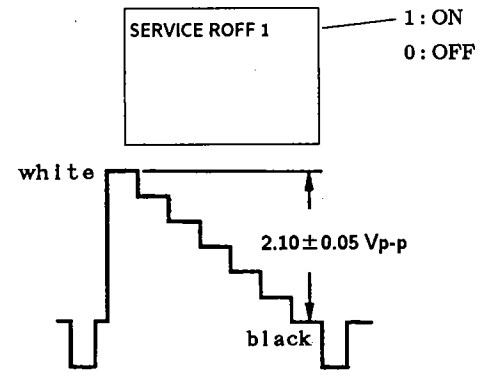
V.FREQUENCY ADJUSTMENT (VFRE)

1) Set the Service Mode.
2) Input an off-air signal (VIDEO IN → no signal).
3) Connect the frequency counter across connector ⑬pin of E 1-1 connector and ground.
4) Select VFRE with 1 and 4.
5) Adjust 3 and 6 to the 56 ±0.5 Hz.
6) Write the memory by pressing MUTING → then ENTER .

SUB CONTRAST ADJUSTMENT (SPIX)

1) Set to Service Mode.
2) Input a color-bar signal. (75 IRE)
3) Set the conditions as follows.

PICTURE	····· MAX
COLOR	····· MIN
BRIGHTNESS	····· MIN
TRINITONE	····· LOW
R OFF	····· ON
G OFF	····· OFF
B OFF	····· OFF



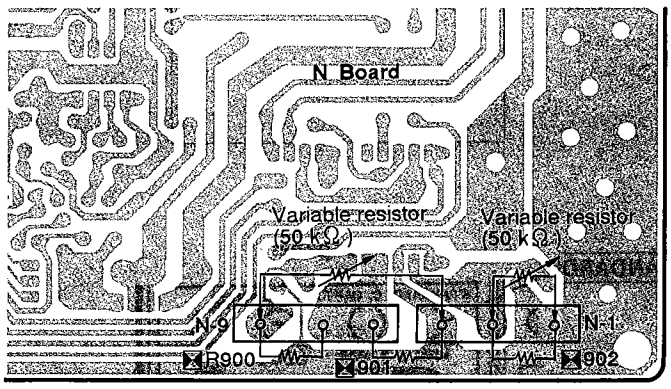
4) Connect an oscilloscope to ⑳pin of E1-1 connector on A board and ground.
5) Adjust 3 and 6 to the 2.10 ± 0.05Vp-p level by select-ing SPIX with 1 and 4.
6) Write the memory by pressing MUTING → then ENTER .
7) Return the following back to normal after adjustment.

G OFF	····· ON
B OFF	····· ON
COLOR	····· CENTER
BRIGHTNESS	····· CENTER
TRINITONE	····· HIGH
PICTURE	····· 80%

— Checking without static voltmeter —

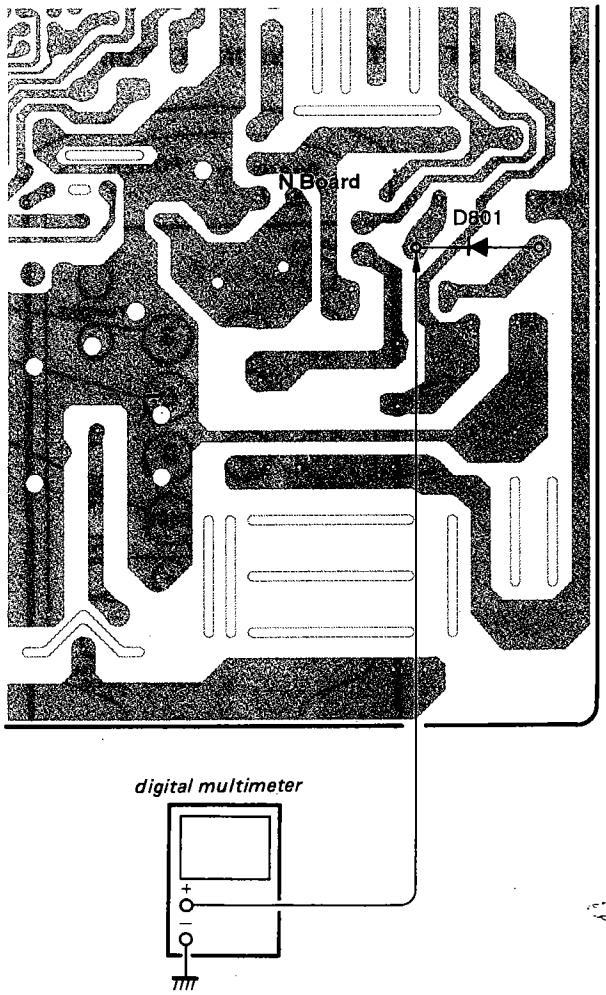
HV HOLD DOWN ADJUSTMENT (R900, R901)

1. Receive all-white signal. Maximize PICTURE and BRIGHTNESS.
2. Remove R902 from the N board. Connect a variable resistor of 50kΩ on each end, and minimize the resistance.
3. Remove R900 and R901 from the N board. Connect a variable resistor of 50kΩ on each end, and minimize the resistance.
4. Connect a digital voltmeter between the D801 cathode and chassis ground of the N board.
5. Turn on the power switch. Adjust the variable resistors connected to the R902 of the N board to make the digital multimeter to read 145.0VDC.
6. Adjust the variable resistors connected to R900 and R901 on the N board so as to activate the HV hold down circuit and turn off the display.
7. Read the variable resistors connected to R900 and R901 and mount fixed resistors of measured resistance to the terminals.
   Note : Select fixed resistance from the following ranges.
   R900 : 1kΩ to 12kΩ
   R901 : Jw 100Ω to 820Ω
8. Maximize resistance of the variable resistor connected to R902 of the N board and turn on power.
9. Vary variable resistance at R902. Confirm that the HV hold down circuit is activated and the display is turned off when voltage reads 134±1.0V.



HV REGULATOR ADJUSTMENT (R902)

1. Receive all-white signal. Maximize PICTURE and BRIGHTNESS.
2. Connect a variable resistor of 50kΩ on each end of R902 of the N board. Maximize resistance.
3. Connect a digital voltmeter between the D801 cathode and the chassis of the N board.
4. Turn on power. Adjust the variable resistor so that the digital multimeter reads 135.0V±1.0V.
5. Read the variable resistance then.
6. Mount a fixed resistor of the measured resistance to R902.
   Note : R902 : Must be 2.2kΩ to 27kΩ
7. Turn on power again. Confirm that the digital multimeter reads 135.0V±1.0V.



SECTION 5
CIRCUIT ADJUSTMENTS

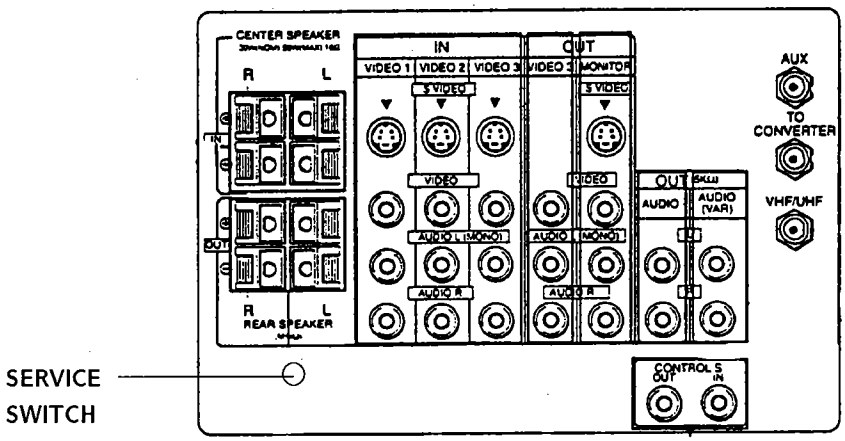
5-1. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

Use of Remote Commander (RM-Y114A) can be performed circuit adjustments about this model.

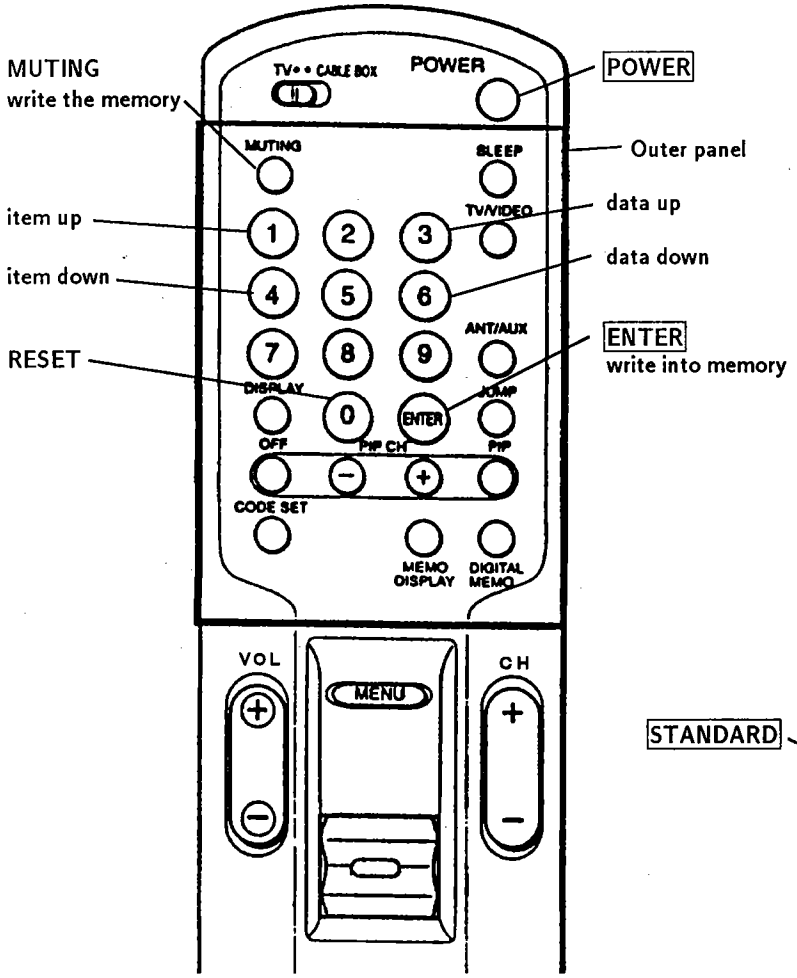
NOTE : Test Equipment Required.
1. Pattern Generator
2. Frequency counter
3. Digital multimeter
4. Audio OSC

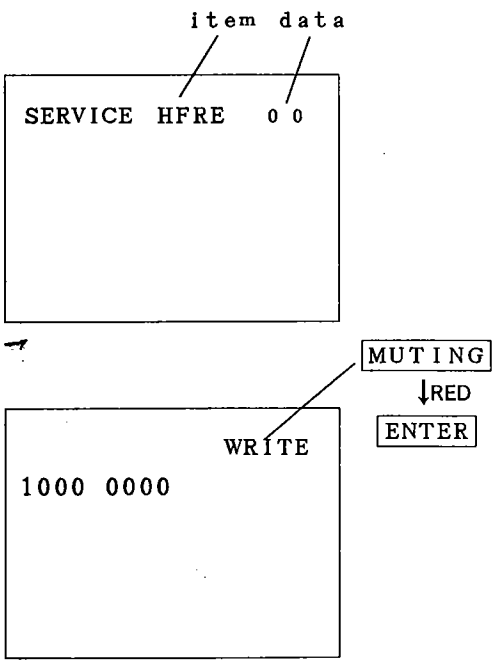
1. METHOD OF SETTING THE SERVICE MODE

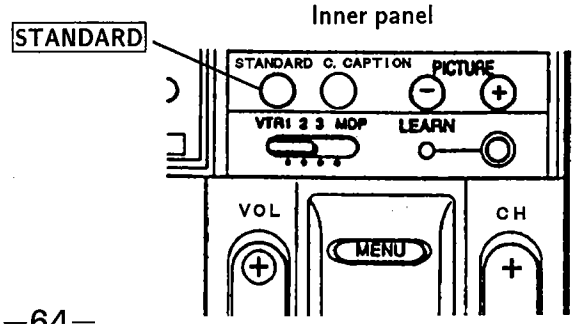
1) Press [POWER] button on the Remote Commander while pressing switch on the rear of the set.



2. ADJUST BUTTONS AND INDICATOR

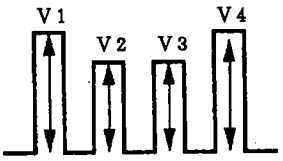




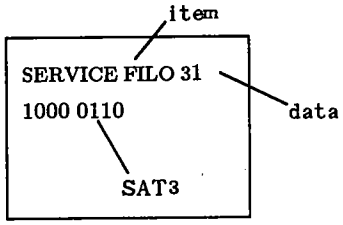


SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)

1) Input a color-bar signal.
2) Press STANDARD to normal.
3) Set to Service Mode.
4) Connect an oscilloscope to pin㉒ of E1-1 connector on A board and ground.
5) Adjust 3 and 4 to the V1=V4 and V2=V3 by select to SHUE and SCOL with 1 and 4. Lower the data 4 steps from this point.



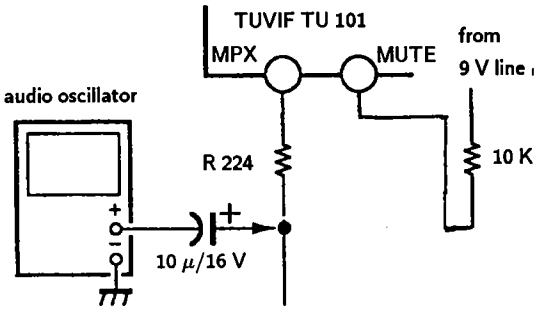
4) Make the data "00" by selecting FILO with 1 and 4 And then, send up the data gradually by pressing 6 . Set the data to D1 before SAT3 changing to 1 from 0.
5) Send up the data gradually. Set data D2 when SAT3 changes 0 from 1.
6) Adjust the data of FILO to $\frac{D1+D2}{2}$.
7) Write into the memory by pressing MUTING → then ENTER .



6) Write into the memory by pressing MUTING →then ENTER .

FILTER ADJUSTMENT (MPX, FILO)

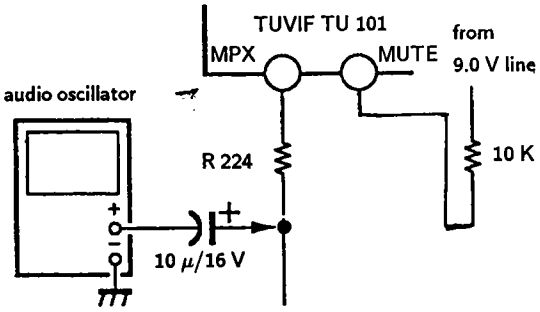
1) Set to Service Mode.
2) Select to TEST with 1 and 4, set the data to "1". Then select MPX and change data to "8" .
3) Connect an audio oscillator to R224 using a capacitor (10μ F/16V), set frequency to 62.936 kHz±0.1 kHz.
And then, through the 10kΩ resistor, feed 9.0V into the mute of TUVIF TU 101.



V 4 fh : SINE-WAVE 62.936 KHz±0.1 KHz
LEVEL 3.0 Vp-p

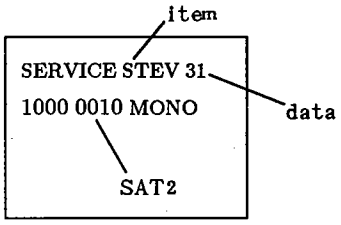
ST VCO ADJUSTMENT (MPX, STEV)

1) Set to Service Mode.
2) Select TEST with 1 and 4 , set the data to "1". And then press MTS to MONO.
3) Select MPX, set the data "8" .
4) Connect an audio oscillator to R 224 using electrolytic capacitor (10μ F/16V) and appply the frequency Vst. Then, apply DC voltage to mute of TUVIF TU 101 using 10kΩ connect to 9.0 V line.



Vfh : SINE-WAVE 15.734 KHz±0.1 KHz
LEVEL 0.28 Vp-p

5) Select STEV with 1 and 4, set the data to "00" with 6. And then, send up the data gradually. Set the data to D1 before SAT2 changes from 0 to 1.
6) Send up data gradually, set the data to D2 when SAT2 changes 1 from 0.
7) Adjust the data of STEV to (D 1+D 2)/2.
8) Write into the memory by pressing MUTING → then ENTER .



MPX IN LEVEL ADJUSTMENT (MPX)

1) Set to Service Mode.
2) Select TEST with 1 and 4, set the data to "0" with 6. And then press MTS to MONO.
3) Select MPX with 1 and 4, set the data to "8" with 3 and 6.
4) Write into the memory by pressing MUTING → then ENTER .

PILOT CANCEL ADJUSTMENT (PILO)

1) Set to the Service Mode.
2) Select PILO with 1 and 4, set the data to "8" with 3 and 6.
3) Write into the memory by pressing MUTING → then ENTER .

SAP VCO f_0 ADJUSTMENT (SAPV)

1) Set to Service Mode.
2) Input a stereo broadcast signal with SAP.
3) Select TEST with 1 and 4, set the data to "0" . And then, press MTS to MAIN.
4) Connect a digital multimeter to TP-1(DBX). This voltage reading will equal V 1.
5) Press MTS to SAP and this voltage will equal V 2.
6) Select SAPV with 1 and 4, adjust 3 and 6 so that V 2=V 1±0.03 VDC.
7) Write the memory by MUTING → ENTER .

SEPARATION ADJUSTMENT (SEP)

1) Set to Service Mode.
2) Press MTS to MAIN and receive a monoral broad -cast signal.

In the next step, receive a stereo broadcast signal.

3) Select SEP and VD with 1 and 4, adjust 3 and 6 so that a clear stereo sound is effected.

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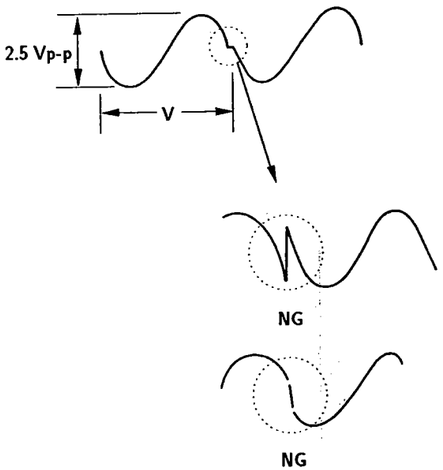
5-3. DS BOARD ADJUSTMENTS

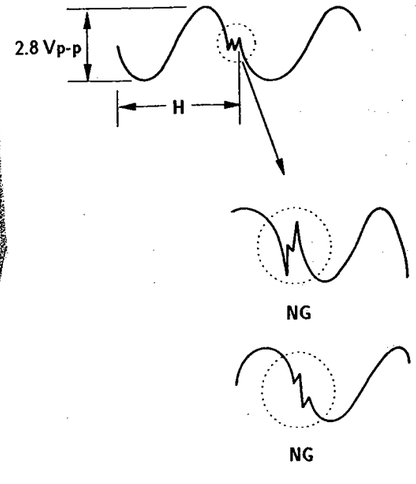
V. 3 WAVE ADJUSTMENT (RV983)

1) Input a color-bar signal.
2) Connect an oscilloscope IC1712 Pin⑦ of DS board ground.
3) Adjust RV983 as shown the following figure.

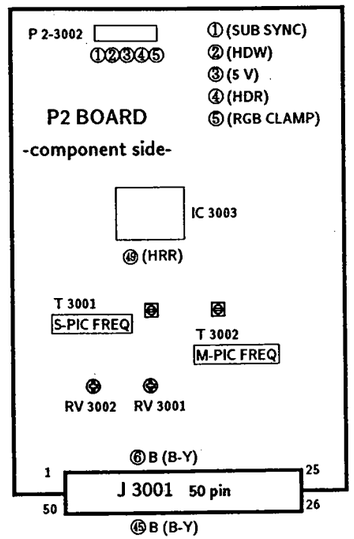


H. 3 WAVE ADJUSTMENT (RV984)

1) Input a color-bar signal.
2) Connect an oscilloscope IC1712 Pin① of DS board ground.
3) Adjust RV984 as shown the following figure.



5-4. P2 BOARD ADJUSTMENTS



MAIN-PICTURE FREQUENCY (T 3002)

1) Set PIP mode.
2) Connect a frequency counten to Pin 11 (HDW) of J 3001.
3) Connect a frequency counten to Pin ㊾ or ㊿ (HRR) of IC 3003 or Pin 5 (RGB CLAMP) of P 2-3002.
4) Short the circuit between Pin 4 (HDR) of P 2-3002 and Pin 3 (5 V) of P 2-3002.
5) Turn T 3002 CLK (P) for the following frequency at Pin ㊾ or ㊿ (HRR) of IC 3003 or at Pin 5 (RGB CLAMP) of P 2-3002.

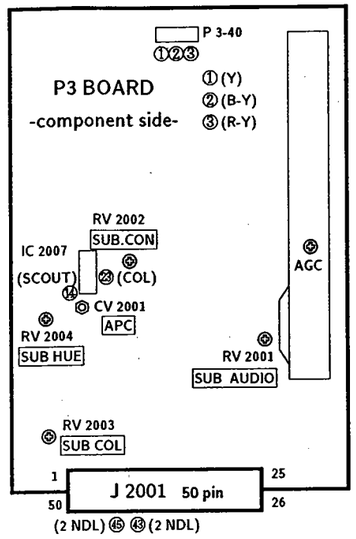
15.734 kHz ± 10 Hz

SUB-PICTURE FREQUENCY (T 3001)

1) Set PIP mode.
2) Connect a frequency counten to Pin 11 (HDW) of J 3001.
3) Connect a frequency counten to Pin ㊾ or ㊿ (HRR) of IC 3003 or Pin 5 (RGB CLAMP) of P 2-3002.
4) Short the circuit between Pin 1 (SUB SYNC) of P 2-3002 and Pin 3 (5 V) of P 2-3002.
5) Turn T 3001 CLK (C) for the following frequency at Pin 2 (HDW) of P 2-3002.

15.734 kHz ± 10 Hz

5-5. P3 BOARD ADJUSTMENTS



RF AGC ADJUSTMENT(IF BLOCK VR)

1) Input a color-bar signal.
2) Set to PICTURE IN PICTURE mode.
3) Adjust AGC VR of TU 2001 so that snow noise and cross-modulation disappear from the picture.
4) Confirm them at every channel.

SUB PICTURE SOUND VOLUME LEVEL (SUB AUDIO) ADJUSTMENT(RV2001)

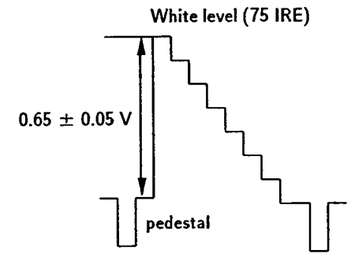
1) Receine an audio signal of 400 Hz. (100% mod.)
2) Adjust RV 2001 for the following level at Pin 43 (2 NDR) or Pin 45 (2 NDL) of J 2001.

500 mVrms ± 2 dB

SUB CONT ADJUSTMENT (RV2002)

1) Obtain the color bar signal on the sub-screen.
2) Obsene at Pin 1 (Y OUT) of P3-42 on an oscilloscope.
   Odjust RV2002 for the following lenel between the white level and pedestal one.

0.65 ± 0.05 Vp-p



SUB COLOR ADJUSTMENT(RV 2003)

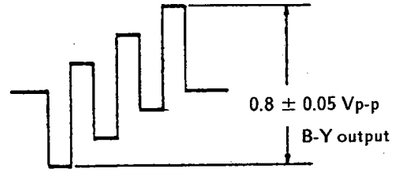
1) Obtain the color bar signal on the sub-screen in the mode of PIP size 1/4.
2) Reset color.
3) Adjust RV 2003 for the following level, obseruing an oscilloscope connectod to Pin 2 (B-Y) of P3-40 (Fig. 1)

0.8 ± 0.05 Vp-p (B-Y)

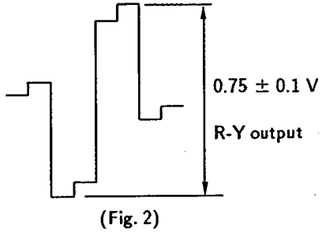
4) Adjust RV 2003 for the following level, obseruing an oscilloscope connectod to Pin 3 (R-Y) of P3-40 (Fig. 2)

0.75 ± 0.1 Vp-p (R-Y)

5) Adjust traxking between sub color and sub hue.



(Fig. 1)



(Fig. 2)

KP-46XBR25/53XBR25/61XBR28
RM-Y114A

P4
(DIGITAL COMB FILTER)

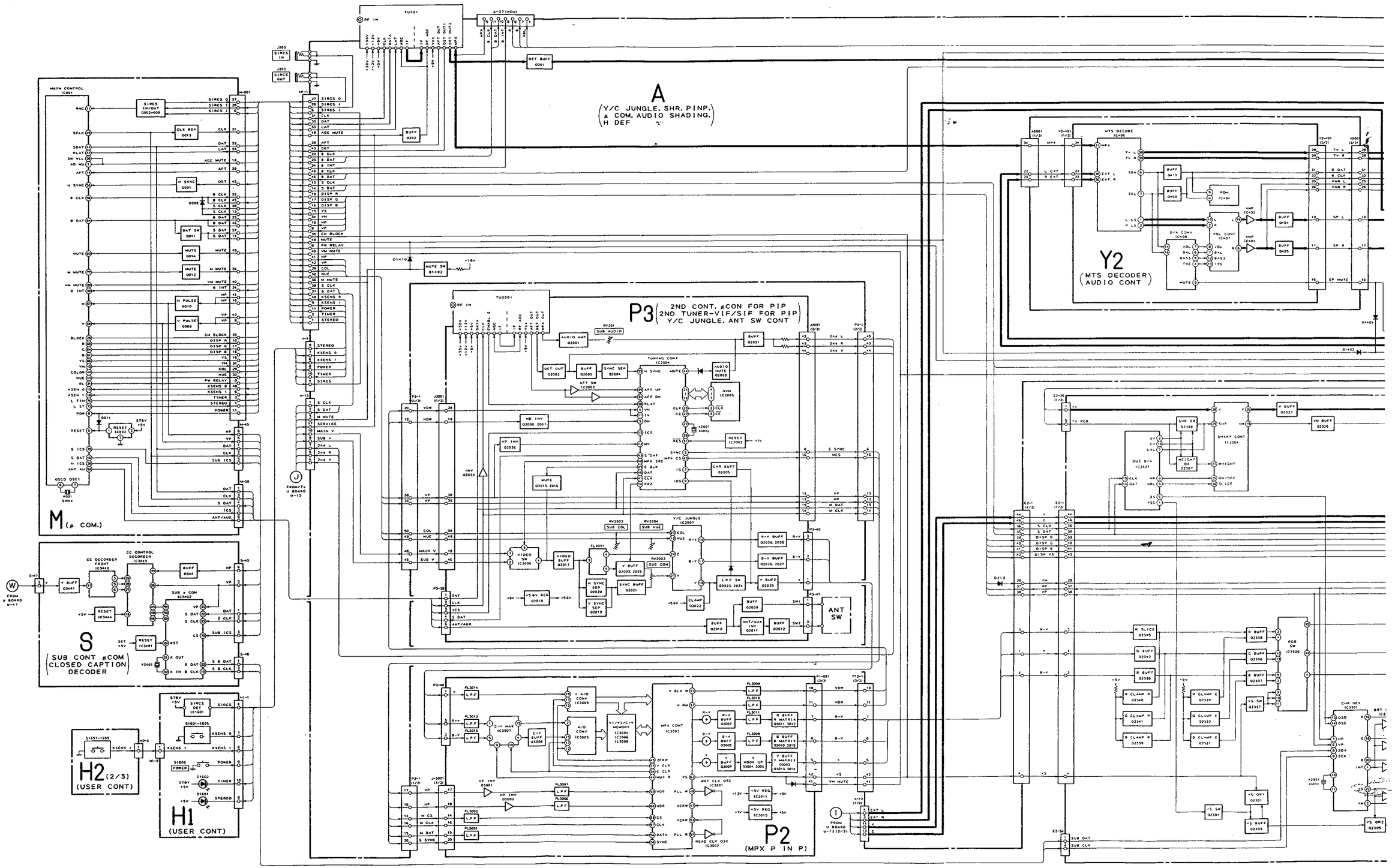
UT (1/3)
(IN/OUT TERMINAL)

H2 (1/3)
(USER CONT)

U (AUDIO I/O)
(VIDEO I/O)

KP-46XBR25/53XBR25/61XBR28
RM-Y114A

-2. BLOCK DIAGRAM (2)



A
Y/C JUNGLE, SHR, PINP, & COM. AUDIO SHADING, H DEF

Y2
(MTS DECODER AUDIO CONT)

X3
(DIGITAL SIGNAL PROCESSOR

YA
(AUDIO AMP)

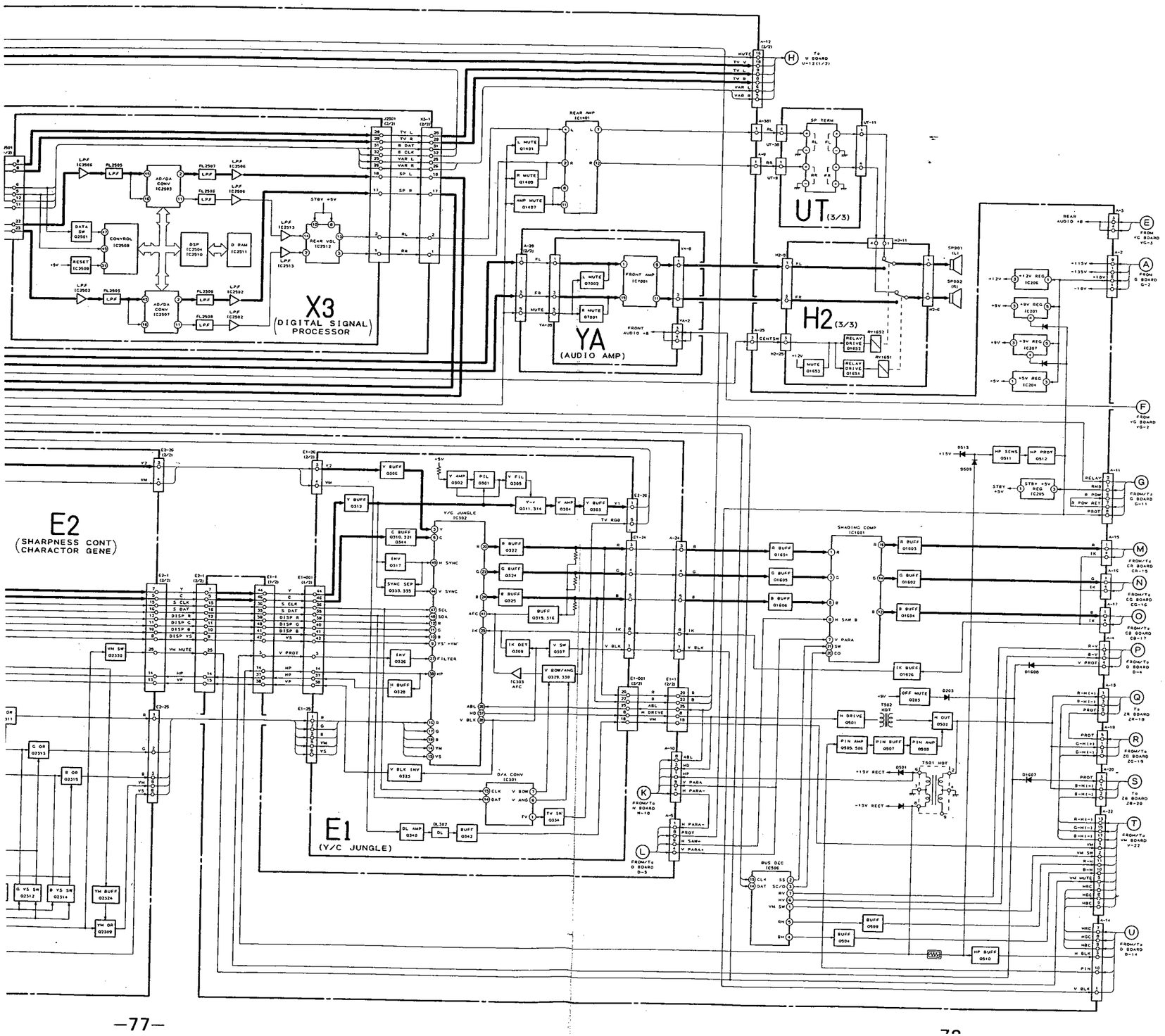
P3
2ND CONT. &CON FOR PIP
2ND TUNER-VIF/SIF FOR PIP
Y/C JUNGLE, ANT SW CONT

P2
(MPX P IN P)

E2
(SHARPNESS CONT CHARACTOR GENE)

E1
(Y/C JUNGLE)

KP-46XBR25/53XBR25/61XBR28
RM-Y114A


X3
(DIGITAL SIGNAL PROCESSOR
YA
(AUDIO AMP)
H2 (3/3)
UT (3/3)
E2
(SHARPNESS CONT
CHARACTOR GENE)
E1
(Y/C JUNGLE)
REAR AMP IC1401
FRONT AMP IC7001
SHADING COMP IC1601
V/C JUNGLE IC302
D/A CONV IC301
BUS DCC IC506
AD/DA CONV IC2503
AD/DA CONV IC2507
DSP IC2504 IC2510
CONTROL IC2508
D RAM IC2511
REAR VOL IC2512
STBY +5V REG IC205
+12V REG IC206
+9V REG IC201
+5V REG IC204
+5V REG IC207
SP TERM
RELAY DRIVE Q1652
RELAY DRIVE Q1651
MUTE Q1653
OFF MUTE Q203
H DRIVE Q501
H OUT Q502
PIN AMP Q505, 506
PIN BUFF Q507
PIN AMP Q508
T501 HOT
T502 HOT
HP SENS Q511
HP PROT Q512
HP BUFF Q510
STBY +5V REG IC205
R POW
R POW RET
PROT
FROM/To U BOARD U-12 (1/2)
FROM YG BOARD YG-3
FROM G BOARD G-2
FROM/To G BOARD G-11
FROM/To CR BOARD CR-15
FROM/To CG BOARD CG-16
FROM/To CB BOARD CB-17
FROM/To D BOARD D-4
To ZR BOARD ZR-18
FROM/To ZG BOARD ZG-19
To ZB BOARD ZB-29
FROM/To VM BOARD V-22
FROM/To D BOARD D-14
FROM/To D BOARD D-10
FROM/To D BOARD D-9
TV RGB
V BLK
H DRIVE
H SAW B
V PARA
SW
CO
FILTER
AFC
IK DET Q309
V SW Q307
V BOW/ANG Q329, 339
IC303 AFC
V BUFF Q306
V AMP Q302
PIL Q301
V FIL Q305
Y-Y Q311, 314
V AMP Q304
V BUFF Q305
V BUFF Q312
C BUFF Q310, 321 Q344
INV Q317
SYNC SEP Q333, 335
INV Q326
H BUFF Q328
V BLK INV Q323
DL AMP Q340
DL Q302
BUFF Q342
R BUFF Q322
G BUFF Q324
B BUFF Q325
BUFF Q315, 316
R BUFF Q1605
G BUFF Q1602
B BUFF Q1604
R BUFF Q1601
G BUFF Q1605
B BUFF Q1606
IK BUFF Q1626
BUFF Q509
BUFF Q504
L MUTE Q1401
R MUTE Q1408
AMP MUTE Q1407
L MUTE Q7002
R MUTE Q7001
STBY +5V
REAR AUDIO +B
FRONT AUDIO +B
+115V
+135V
+180V
-15V
+15V
+8V
+5V
+3V
+12V
SP901 (L)
SP902 (R)
RV1652
RV1651
D513
D509
D501
D502
D503
D504
D505
D506
D507
D508
D510
D511
D512
D513
D514
D515
D516
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D531
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D541
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D548
D549

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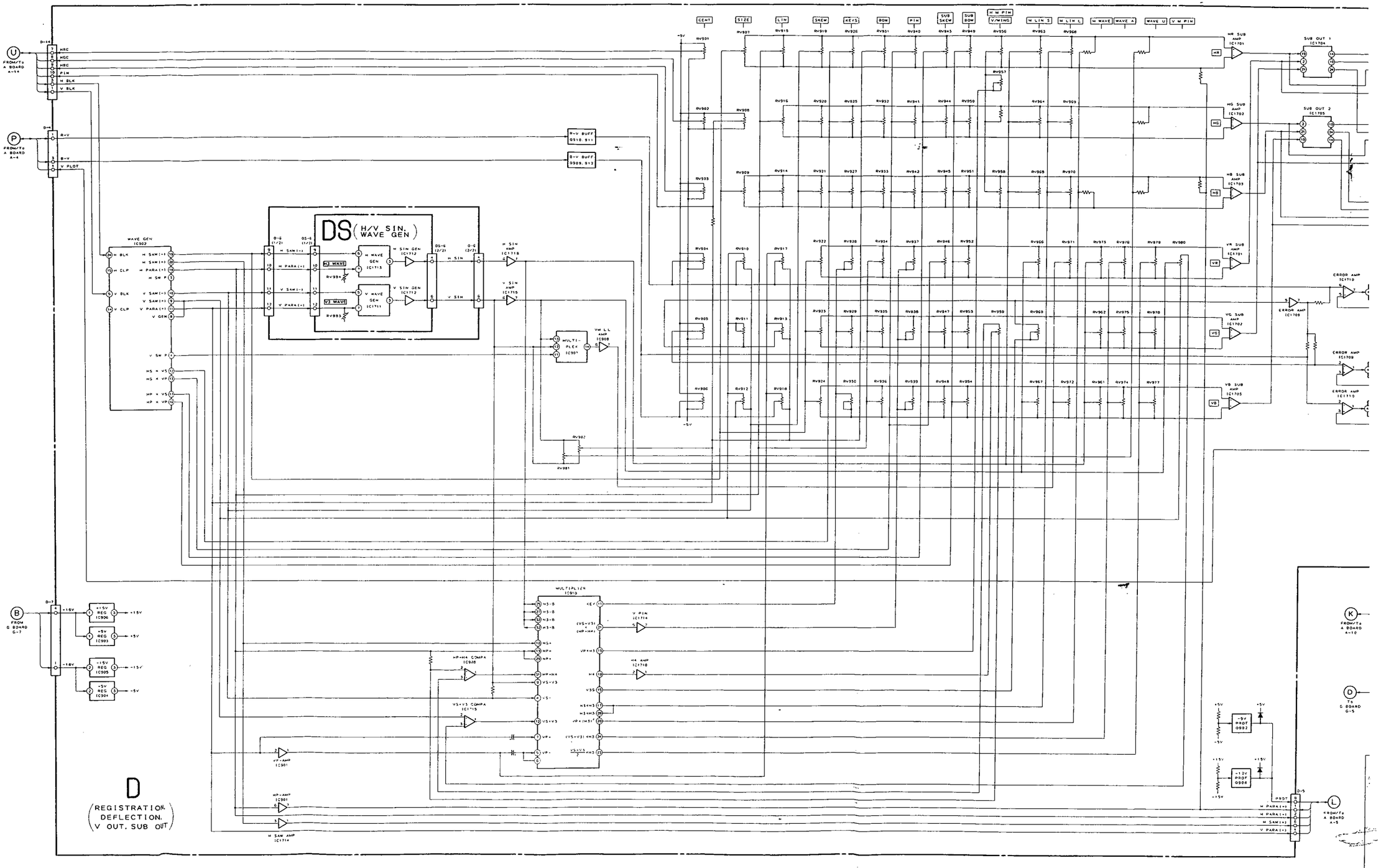
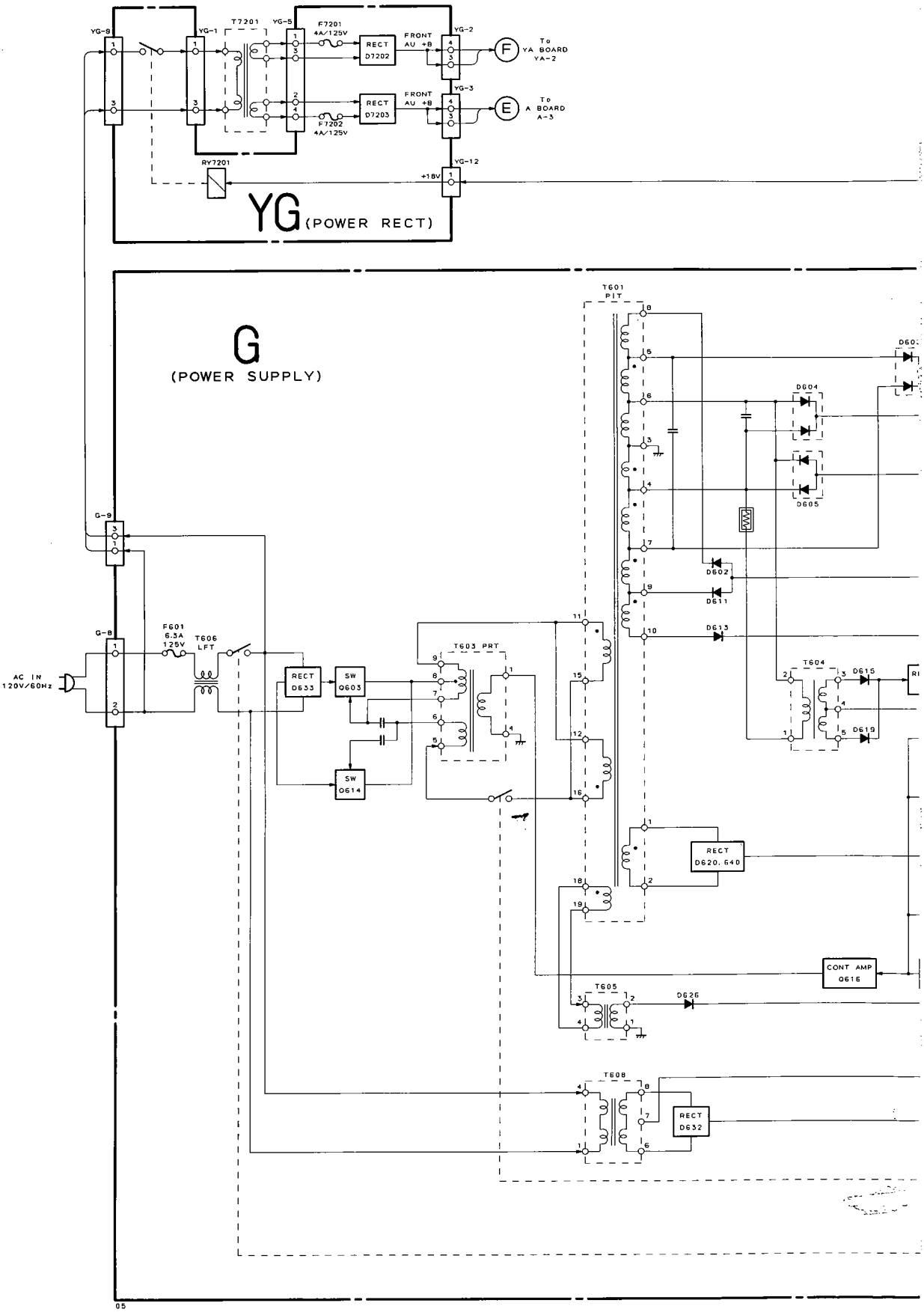
RM-Y114A

6-3. BLOCK DIAGRAM (3)



SECTION 6
DIAGRAMS

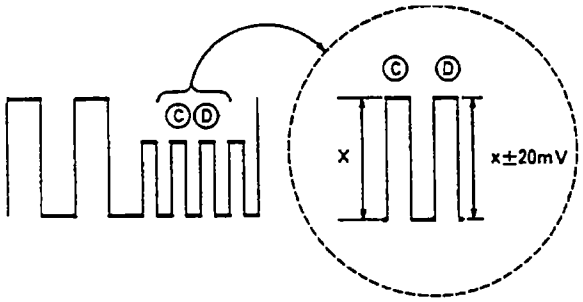
6-1. BLOCK DIAGRAM (1)



SUB HUE ADJUSTMENT(RV 2004)

1) Obtain the color bar signal on the sub-screen in the mode of PIP size 1/4.
2) Reset hue.
3) Obserne the signal at Pin 6 or Pin 45 of J 3001 on P 2 board on an oscilloscope and make adjustment to obtain the following level.

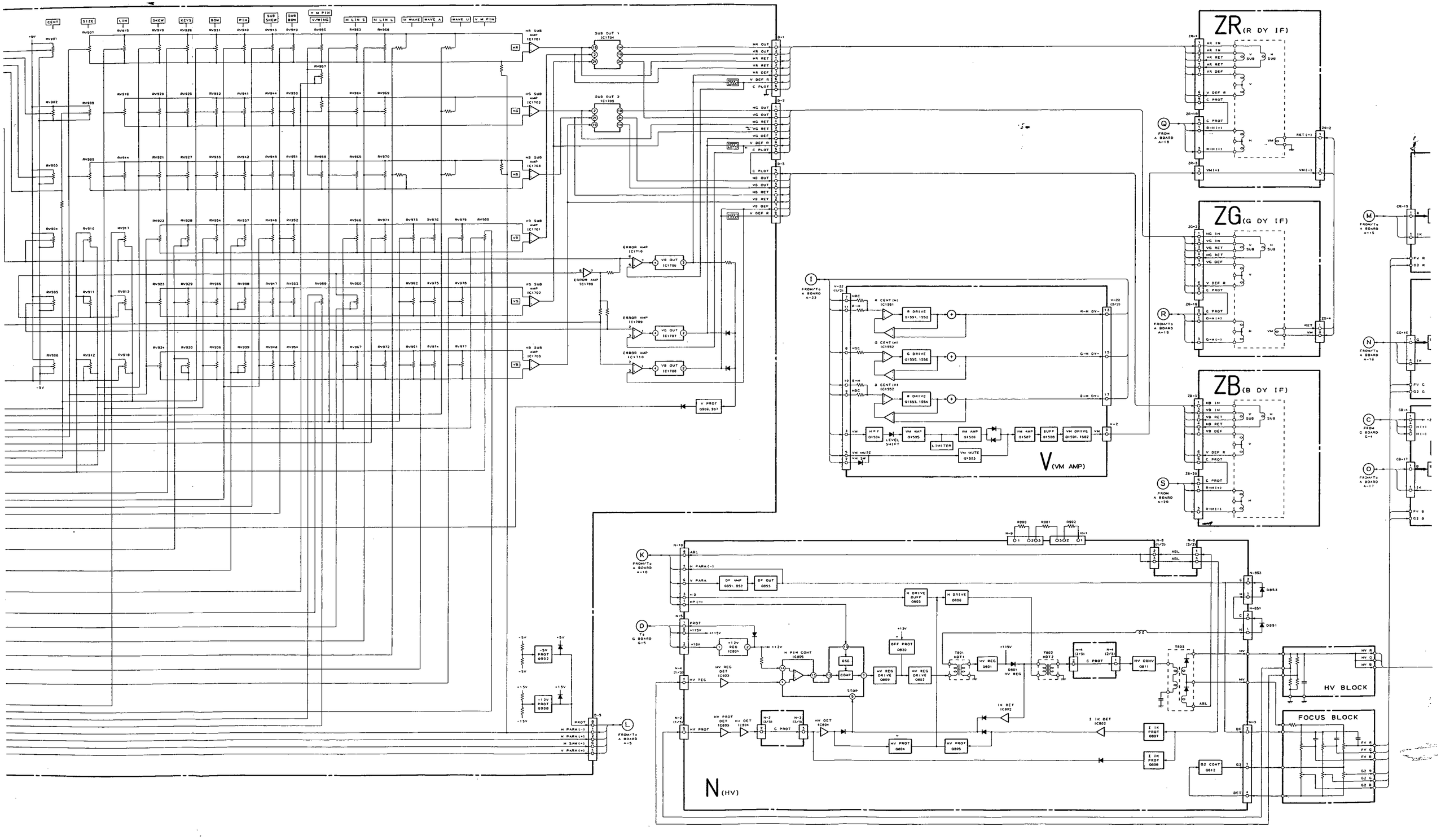
D : X ± 20 mV



APC ADJUSTMENT(CV 2001)

Connect Pin ㉓ (COL) of IC 2007 fo ground and connect a frequency cound fo Pin ⑭ (SCOUT) fo obtain the following level.

3579545 ± 40 Hz


CENT
SIZE
LIN
SKEW
KEYS
BOW
PIN
SUB SKEW
SUB BOW
H M PIN
V/W ING
H LIN S
H LIN L
H WAVE
WAVE A
WAVE U
V W PIN
HR SUB AMP IC1701
HG SUB AMP IC1702
HB SUB AMP IC1703
VR SUB AMP IC1701
VG SUB AMP IC1702
VB SUB AMP IC1703
SUB OUT 1 IC1704
SUB OUT 2 IC1705
ERROR AMP IC1710
ERROR AMP IC1709
ERROR AMP IC1719
VR OUT IC1706
VG OUT IC1707
VB OUT IC1708
V PROT Q806, 807
D-1
D-2
D-3
D-5
HR OUT
VR OUT
HR RET
VR RET
VR DEF
V DEF R
C PLOT
HG OUT
VG OUT
HG RET
VG RET
VG DEF
HB OUT
VB OUT
HB RET
VB RET
VB DEF
+5V
-5V
+15V
-15V
-5V PROT Q907
+12V PROT Q908
PROT
H PARA(-)
H PARA(+)
H SAW(+)
V PARA(+)
FROM/To A BOARD A-5
ZR (R DY IF)
ZG (G DY IF)
ZB (B DY IF)
HR IN
VR IN
HG IN
VG IN
HB IN
VB IN
V SUB
H SUB
V DEF R
C PROT
R-H(+)
R-H(-)
G-H(+)
G-H(-)
B-H(+)
B-H(-)
VM
RET(-)
VM(+)
VM(-)
FROM A BOARD A-18
FROM/To A BOARD A-19
FROM A BOARD A-20
V (VM AMP)
R CENT (H) IC1551
G CENT (H) IC1552
B CENT (H) IC1553
R DRIVE Q1551, 1552
G DRIVE Q1555, 1556
B DRIVE Q1553, 1554
R-H DY-
G-H DY-
B-H DY-
HPF Q1504
LEVEL SHIFT
VM AMP Q1505
VM AMP Q1506
LIMITER
VM MUTE Q1503
VM AMP Q1507
BUFF Q1508
VM DRIVE Q1501, 1502
VM MUTE
VM SW
FROM/To A BOARD A-22
FROM/To A BOARD A-15
FROM/To A BOARD A-16
FROM G BOARD G-4
FROM/To A BOARD A-17
FV R
G2 R
FV G
G2 G
FV B
G2 B
N (HV)
ABL
H PARA(-)
V PARA
H D
HP(-)
PROT
+115V
+18V
DF AMP Q851, 852
DF OUT Q855
+12V REG IC803
H PIN CONT IC805
H DRIVE BUFF Q803
H DRIVE Q806
OSC
COMP
OFF PROT Q820
HV REG DRIVE Q809
HV REG DRIVE Q807
T801 HOT1
T802 HOT2
T803
HV REG Q801
D801 HV REG
HV CONV Q811
C PROT
IK DET IC802
I IK DET IC802
I IK PROT Q807
I IK PROT Q808
G2 CONT Q812
HV REG DET IC803
HV PROT DET IC805
HV DET IC804
HV PROT Q804
HV PROT Q805
STOP
R900
R901
R902
D853
D851
HV R
HV G
HV B
HV BLOCK
FOCUS BLOCK
DF
G2
DET
FROM/To A BOARD A-10
TO G BOARD G-5
FROM/To A BOARD A-5

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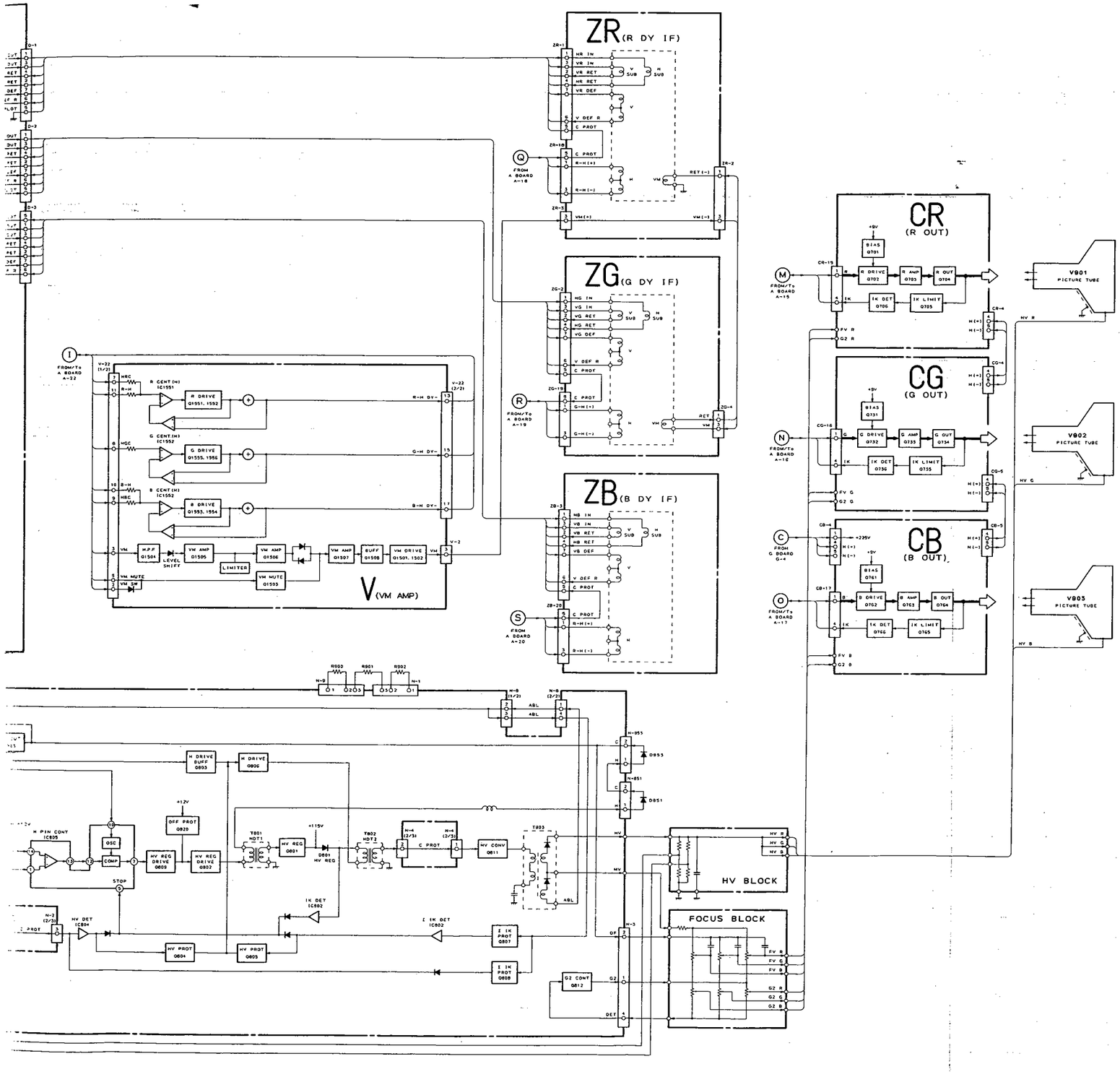
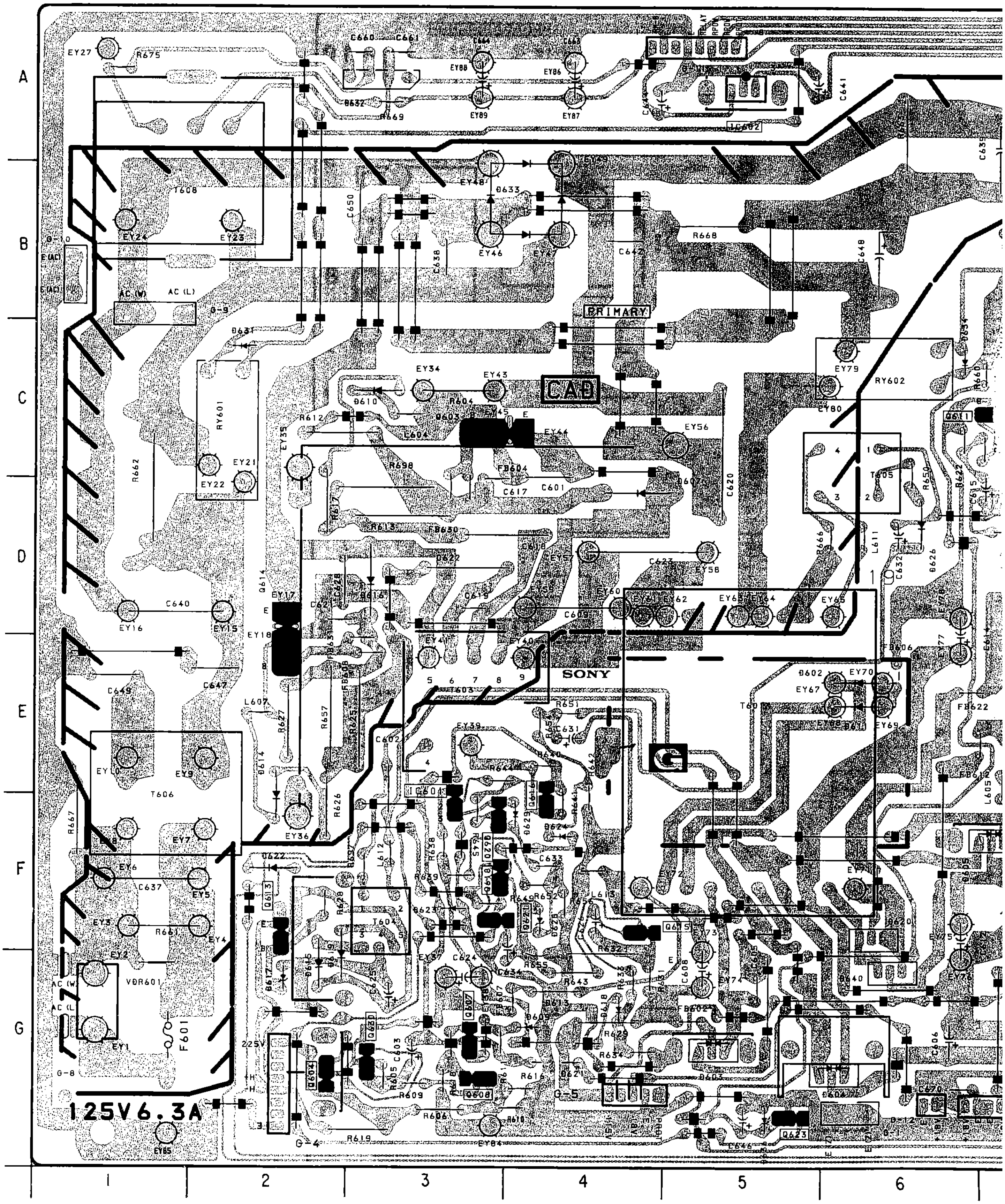
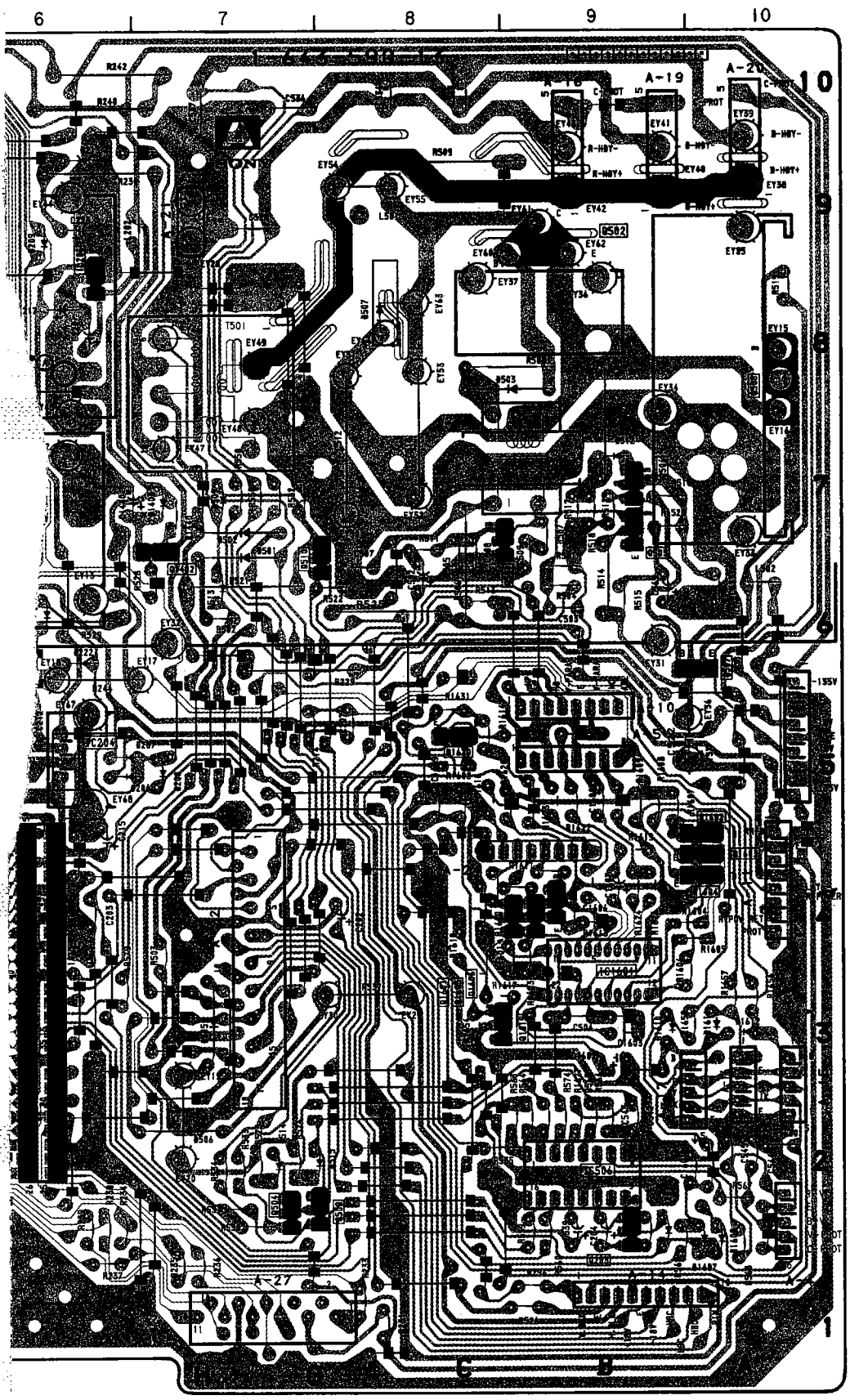


G [POWER SUPPLY]

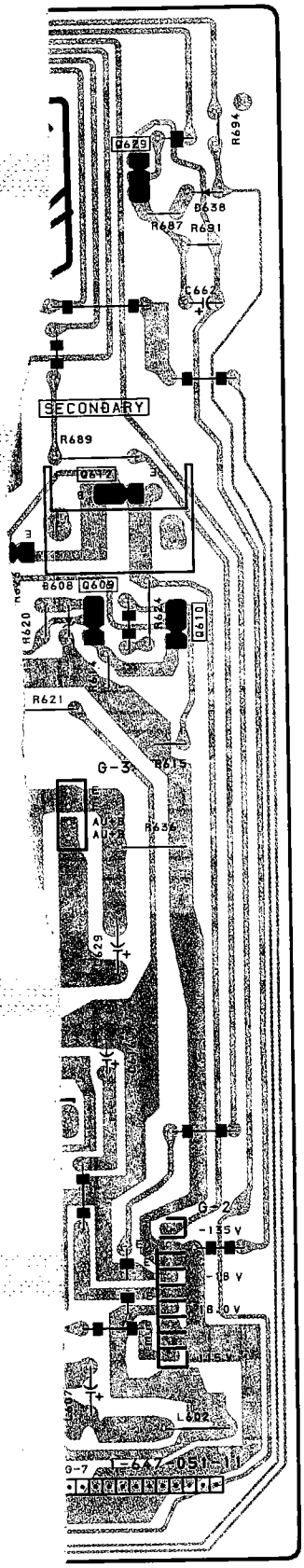
– G Board –


A
B
C
D
E
F
G
1
2
3
4
5
6
PRIMARY
CAD
SONY
125V6.3A
T608
T606
T605
T604
T603
RY601
RY602
IC601
IC602
VDR601
F601
AC (W)
AC (L)
G-10
G-9
G-8
G-5
G-4
225V
R662
R667
R668
C640
C637
C649
C647
C620
C609
C623
EY27
EY24
EY23
EY46
EY48
EY34
EY43
EY56
EY79
EY80
EY16
EY15
EY36
EY85
EY84


6
7
8
9
10
A-18
A-19
A-20
A-27
T501
135V

H1 [USER CONTROL] **H2** [USER CONTROL] **Ds** [SIN. WAVE. GEN]

G Board

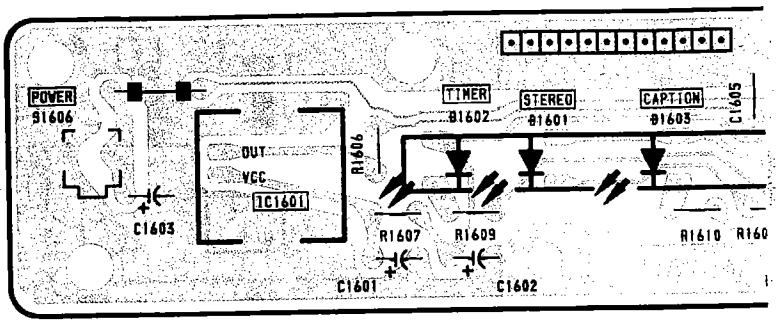


IC	
IC601	E-3
IC602	A-5

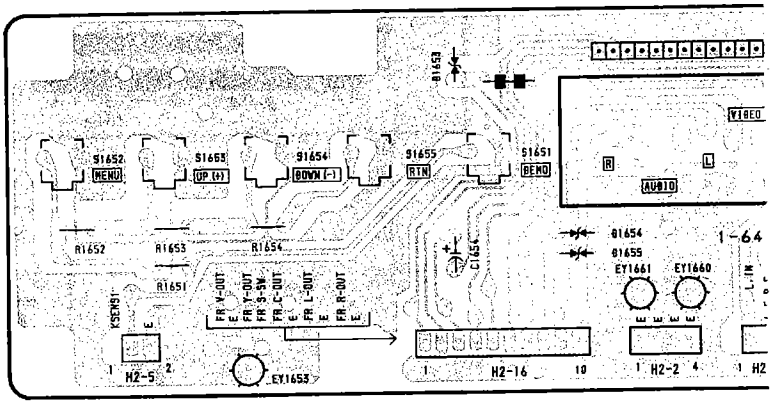
TRANSISTOR	
Q603	C-3
Q604	G-2
Q607	G-3
Q608	G-3
Q609	C-7
Q610	C-7
Q611	C-7
Q612	C-7
Q613	F-2
Q614	D-2
Q615	F-4
Q616	E-4
Q618	F-3
Q620	F-3
Q621	F-3
Q623	G-5
Q629	A-7
Q630	G-3

DIODE	
D602	E-6
D603	G-5
D604	G-6
D605	F-7
D607	D-4
D608	C-7
D609	G-4
D610	C-3
D611	E-6
D613	G-4
D614	E-2
D615	G-2
D616	D-3
D617	G-2
D618	G-4
D619	F-2
D620	F-6
D621	G-4
D622	F-2
D623	F-3
D624	F-4
D626	D-6
D628	F-4
D629	F-4
D631	C-2
D632	A-3
D633	B-4
D634	C-6
D636	G-5
D638	A-7
D640	G-6
D650	F-7

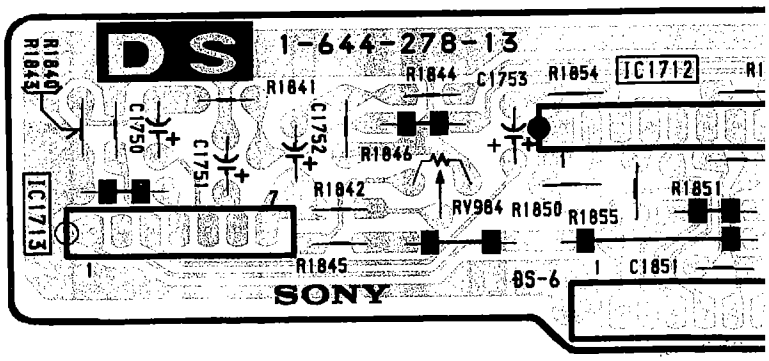
– H1 Board –



– H2 Board –

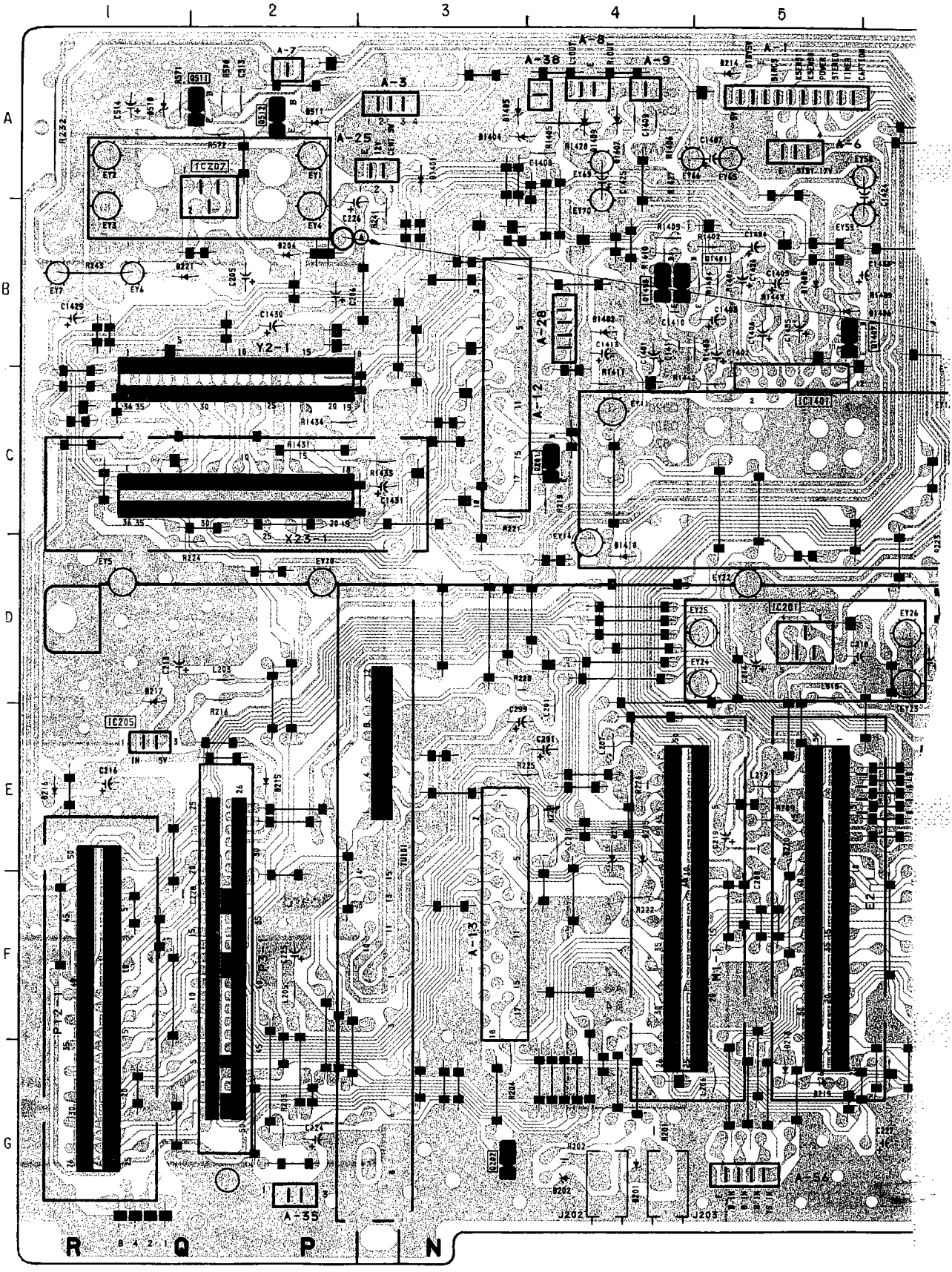


– DS Board –



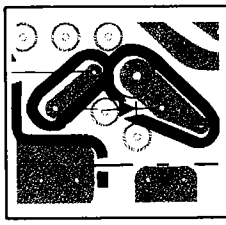
A YCJ/SHR/PINP, MICRO COM. /AUDIO, SHADING/H. DEF.

– A Board –

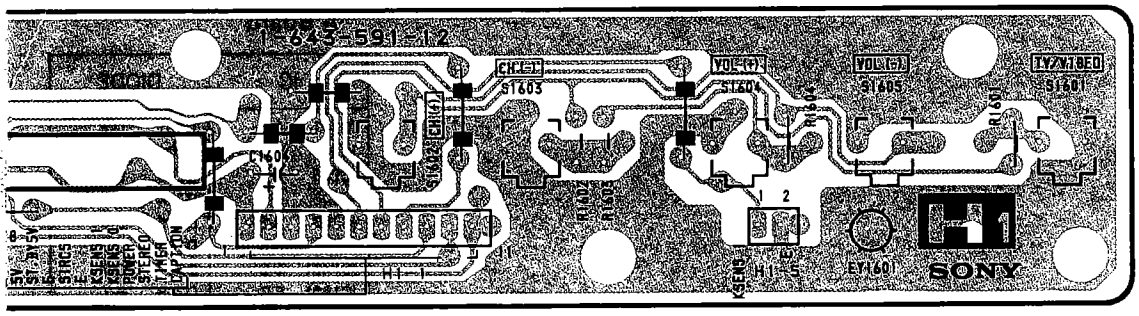


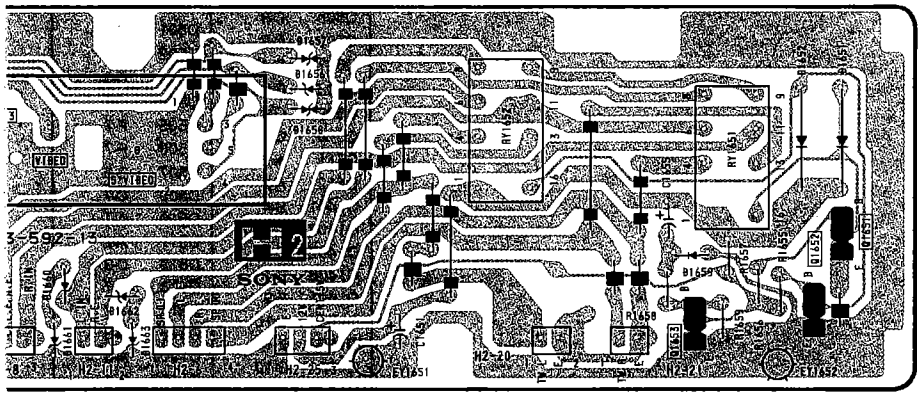
A Board

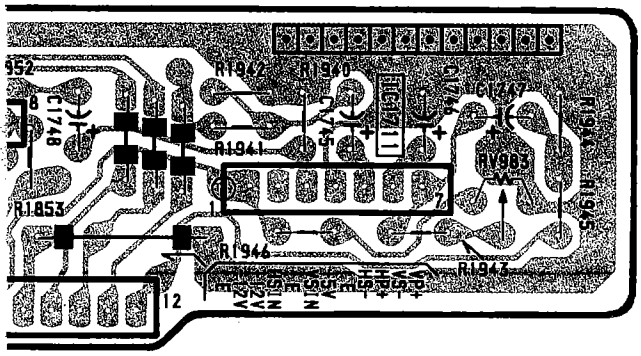
IC		DIODE	
IC201	D-5	D201	G-4
IC204	D-6	D202	G-4
IC205	E-1	D203	G-9
IC206	B-6	D204	B-2
IC207	A-2	D205	E-4
IC506	G-9	D206	D-7
IC1401	C-5	D207	D-7
IC1601	F-9	D208	E-7
		D209	B-6
		D211	E-4
		D213	A-6
TRANSISTOR		D214	A-5
		D215	E-2
Q201	C-4	D216	E-1
Q202	G-3	D217	E-1
Q203	G-9	D219	G-5
Q501	C-9	D220	E-5
Q502	B-9	D221	B-1
Q504	G-7	D222	D-6
Q505	C-9	D223	D-6
Q506	C-9	D501	C-7
Q507	D-10	D502	C-7
Q508	B-10	D503	B-9
Q509	G-8	D504	C-7
Q510	C-8	D505	F-7
Q511	A-2	D506	F-7
Q512	A-2	D507	B-8
Q1401	B-4	D509	C-7
Q1402	C-7	D510	A-1
Q1407	B-5	D511	A-2
Q1408	B-4	D512	C-9
Q1601	E-9	D513	D-7
Q1602	E-10	D514	G-7
Q1603	E-10	D515	G-8
Q1604	E-10	D1401	A-3
Q1605	E-9	D1402	B-4
Q1606	E-9	D1403	C-7
Q1620	D-8	D1404	A-3
		D1405	A-3
		D1406	B-5
		D1407	A-4
		D1408	B-5
		D1409	A-4
		D1607	G-10
		D1608	G-10



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.


1-843-591-12
CH(-)
CH(+)
VOL(-)
VOL(+)
TV/VIDEO
S1603
S1604
S1605
S1601
E1601
SONY


SONY


R1942
R1940
C1247
C1248
R1941
RV903
R1853
R1946
R1943

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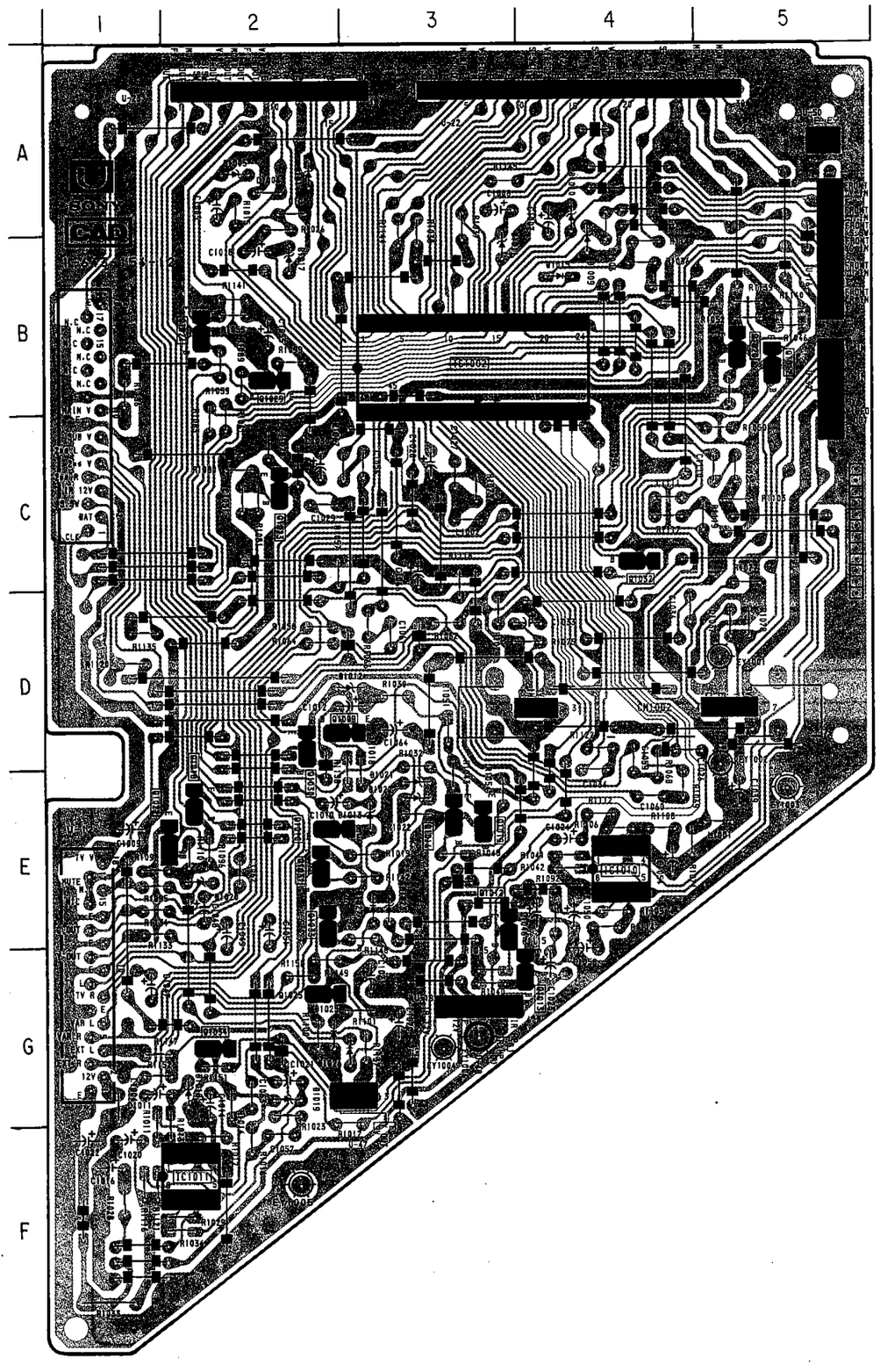
U [AUDIO IN/OUT, VIDEO IN/OUT]

UT [IN/OUT TERMINAL SP. TERMINAL]

– U Board –



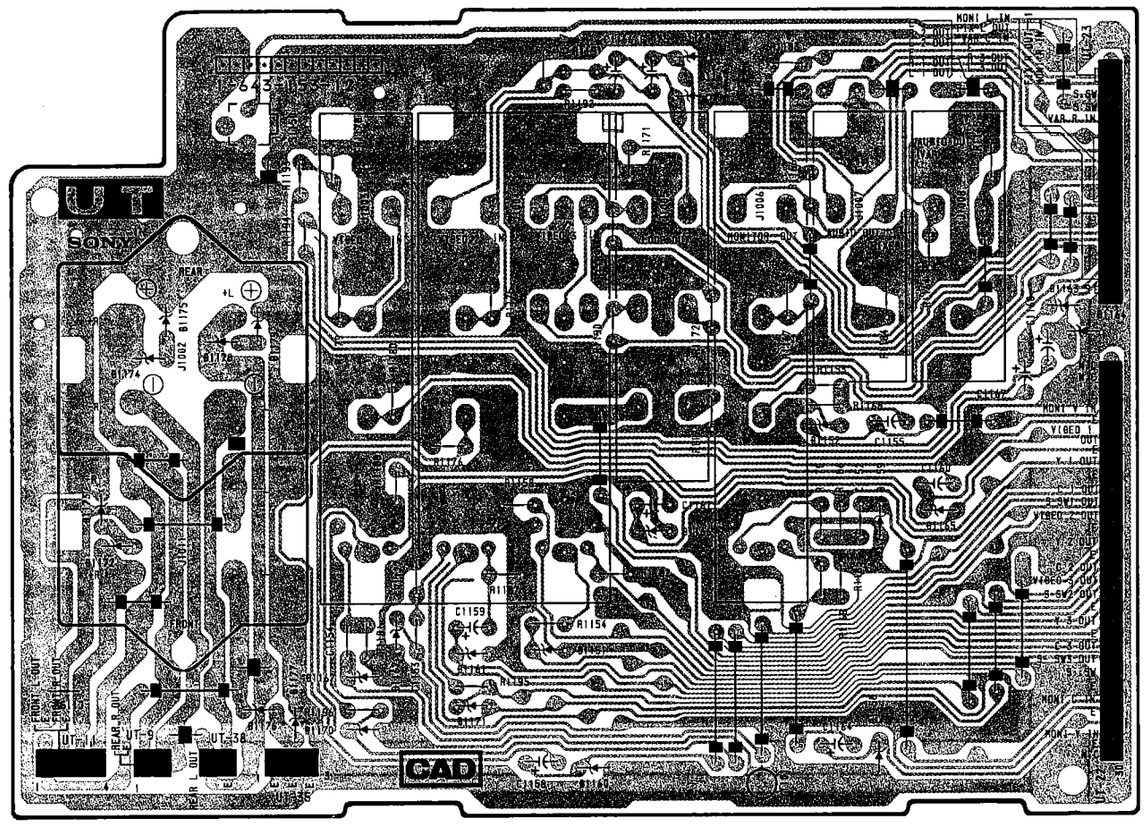
U Board

IC	
IC1002	B-3
IC1011	F-2

TRANSISTOR	
Q1009	D-2
Q1010	E-2
Q1016	E-3
Q1017	B-5
Q1018	E-2
Q1019	E-3
Q1020	B-5
Q1021	B-2
Q1022	E-1
Q1023	C-2
Q1029	B-2
Q1030	D-2
Q1031	E-2
Q1032	C-4
Q1033	E-2
Q1034	G-2

DIODE	
D1005	A-2
D1009	B-4
D1010	A-4
D1011	B-3
D1012	D-3
D1013	E-3
D1017	B-2
D1018	G-2
D1019	G-2
D1020	E-2
D1021	E-3
D1022	E-3

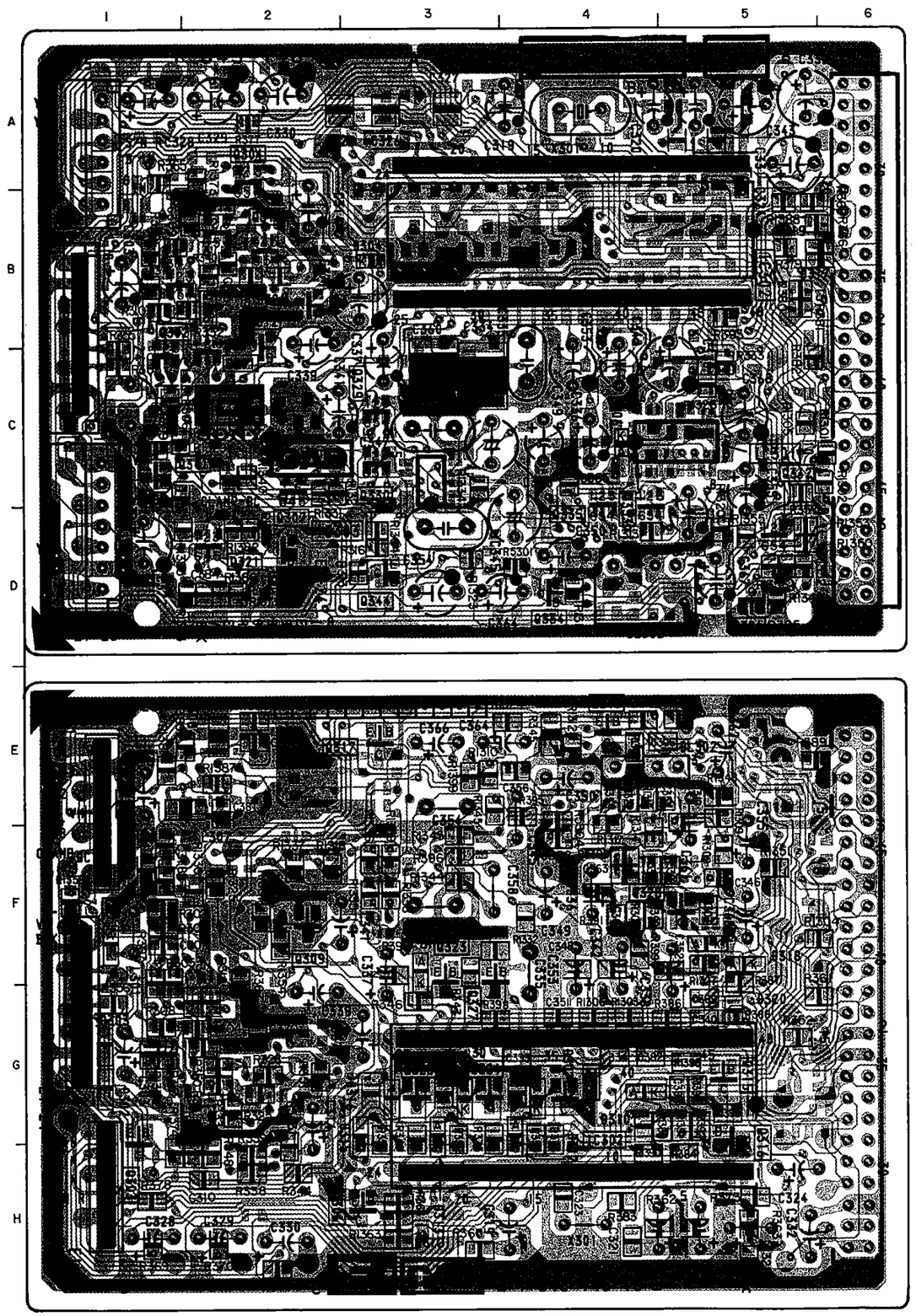
– UT Board –



KP-46XBR25/53XBR25/61XBR28 RM-Y114A

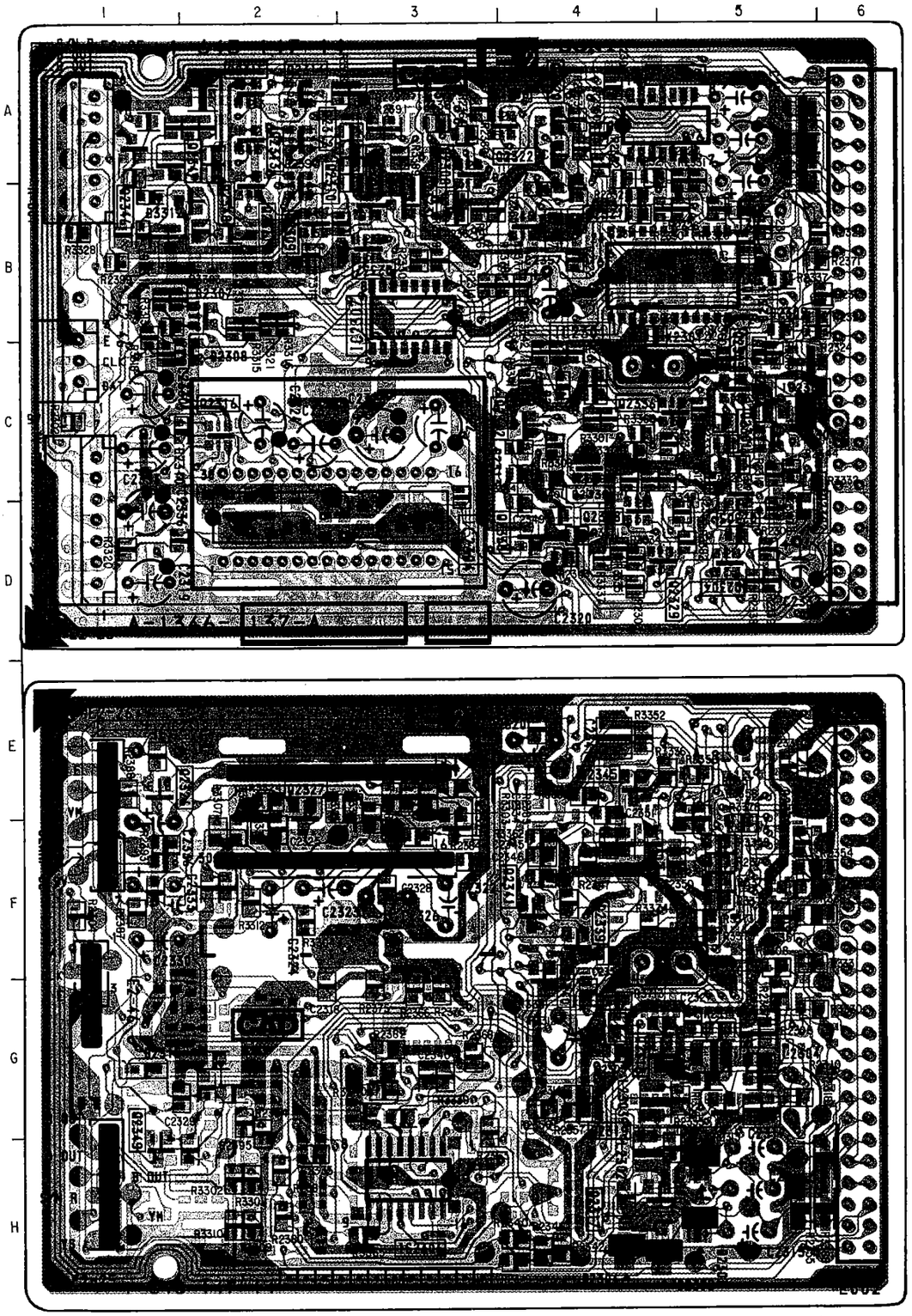
E1 [Y/C JUNGLE]

– E1 Board –



E2 [SHARPNESS CONT, CHARACTOR GENERATER]

– E2 Board –



E2 Board

IC	
IC2301	B-4
IC2303	A-5
IC2304	D-3, E-2
IC2306	H-3
IC2307	B-3

TRANSISTOR	
Q2301	C-5
Q2303	C-5
Q2304	D-5
Q2305	C-5
Q2306	A-3
Q2307	B-4
Q2308	A-3
Q2309	B-2
Q2310	A-2
Q2311	A-2
Q2312	A-2
Q2313	A-2
Q2314	A-2
Q2315	A-2
Q2317	H-4
Q2318	G-4
Q2319	G-5
Q2320	A-4
Q2321	A-4
Q2322	A-4
Q2324	B-3
Q2326	E-1
Q2327	E-2
Q2330	C-4
Q2337	B-3
Q2338	D-4
Q2339	F-4
Q2340	F-4
Q2341	F-4
Q2342	C-4
Q2345	E-4

DIODE	
D2306	C-5
D2307	B-2
D2308	B-2
D2309	B-5
D2312	C-4
D2313	C-4
D2314	B-5
D2317	A-4

- ▒▒▒ : Pattern from the side which enables seeing.

- ▒▒▒ : Pattern from the side which enables seeing.
- ▒▒▒ : Pattern of the rear side.

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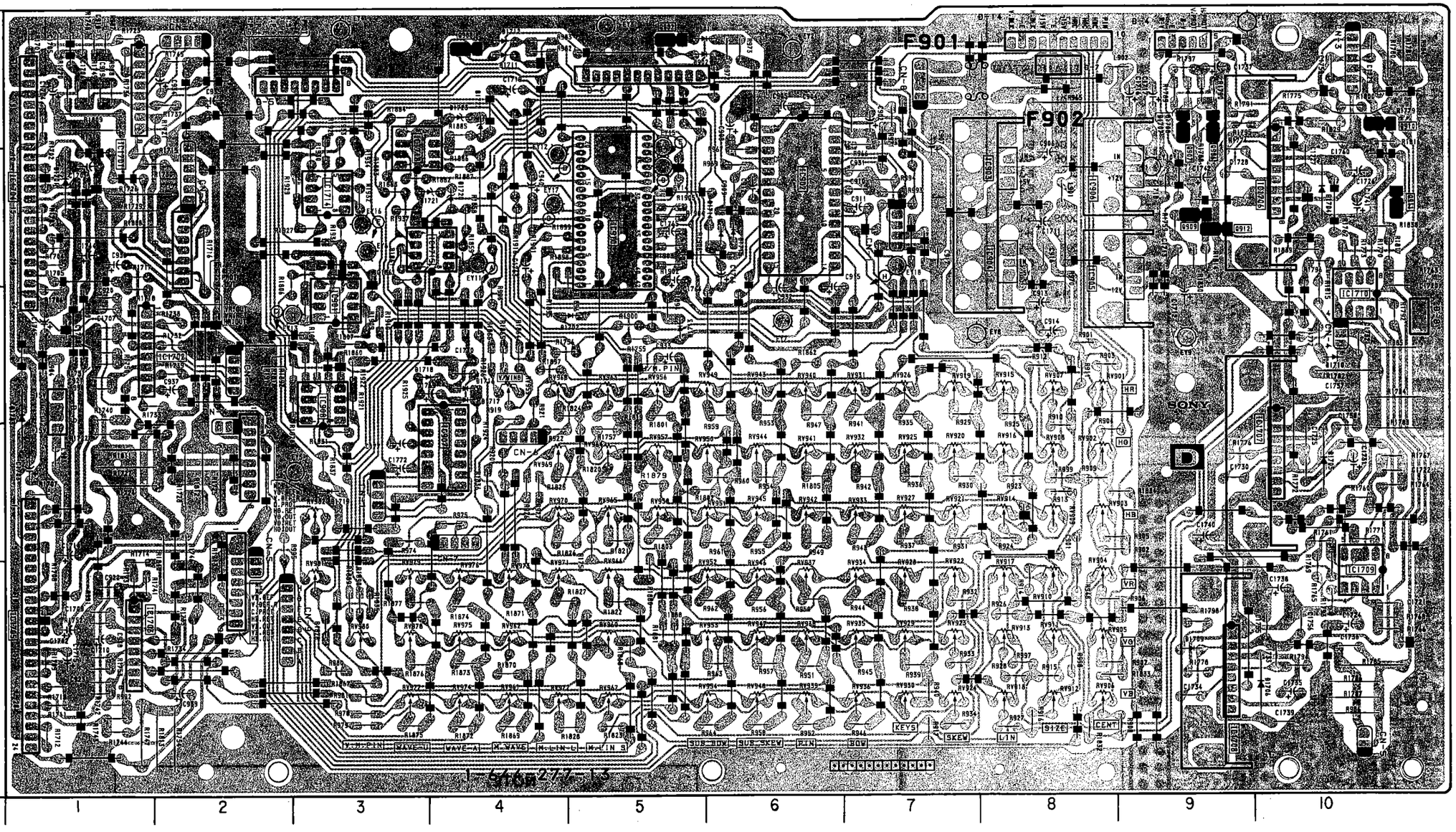
RM-Y114A

D REGISTRATION, DEFLECTION, V-OUT, SUB-OUT

D Board –



D Board

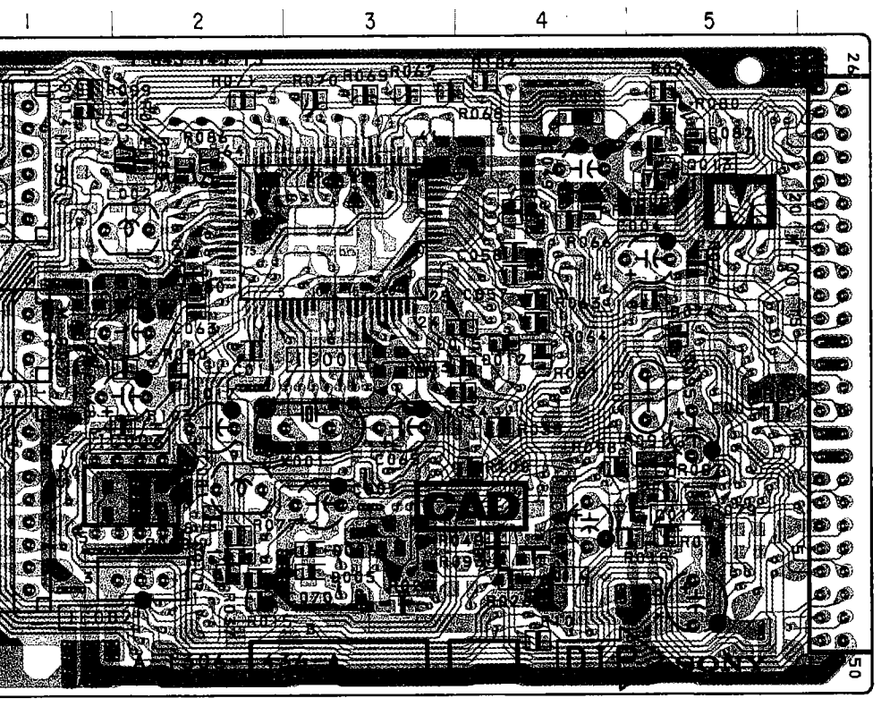
IC		VARIABLE RESISTOR			
IC901	C-3	RV901	C-9	RV962	E-4
IC902	B-6	RV902	D-9	RV963	C-5
IC903	B-8	RV903	D-9	RV964	D-5
IC904	B-8	RV904	E-9	RV965	D-5
IC905	B-9	RV905	D-9	RV966	E-5
IC906	B-9	RV906	E-9	RV967	E-5
IC907	D-4	RV907	C-8	RV968	C-5
IC908	C-3	RV908	D-8	RV969	D-5
IC910	B-5	RV909	D-8	RV970	D-5
IC1701	A-1	RV910	E-8	RV971	E-5
IC1702	C-2	RV911	E-8	RV972	E-5
IC1703	E-1	RV912	E-8	RV973	E-4
IC1704	B-1	RV913	E-8	RV974	E-4
IC1705	E-1	RV914	D-8	RV975	E-4
IC1706	B-10	RV915	C-8	RV976	E-4
IC1707	D-10	RV916	D-8	RV977	E-3
IC1708	E-9	RV917	E-8	RV978	E-3
IC1709	E-10	RV918	E-8	RV979	E-3
IC1710	C-10	RV919	C-7	RV980	E-3
IC1714	B-3	RV920	D-7	RV981	E-3
IC1715	B-4	RV921	D-7	RV982	D-3
IC1718	B-4	RV922	E-7		
TRANSISTOR		RV923	E-7		
Q902	A-5	RV924	E-7		
Q906	A-9	RV925	D-7		
Q907	A-9	RV926	C-7		
Q908	A-4	RV927	D-7		
Q909	D-9	RV928	E-7		
Q910	A-10	RV929	E-7		
Q911	B-10	RV930	E-7		
Q912	B-9	RV931	C-7		
DIODE		RV932	D-7		
D901	A-6	RV933	D-7		
D902	A-6	RV934	E-7		
D1701	B-1	RV935	E-7		
D1702	C-5	RV936	E-7		
D1703	C-1	RV937	E-6		
D1704	B-10	RV938	E-6		
D1705	D-10	RV939	E-6		
D1706	E-10	RV940	C-6		
D1707	A-9	RV941	D-6		
D1708	A-9	RV942	D-6		
D1709	E-9	RV943	C-6		
D1710	C-10	RV944	D-6		
D1711	A-4	RV945	D-6		
D1712	A-4	RV946	E-6		
D1713	C-5	RV947	E-6		
D1714	B-6	RV948	E-6		
D1715	B-6	RV949	C-6		
D1716	C-4	RV950	D-6		
D1717	C-4	RV951	D-6		
D1718	C-4	RV952	E-6		
D1720	B-4	RV953	E-6		
D1721	B-4	RV954	E-6		
D1722	A-4	RV956	C-5		
D1723	A-4	RV957	D-5		
		RV958	D-5		
		RV959	C-4		
		RV960	E-5		
		RV961	E-4		

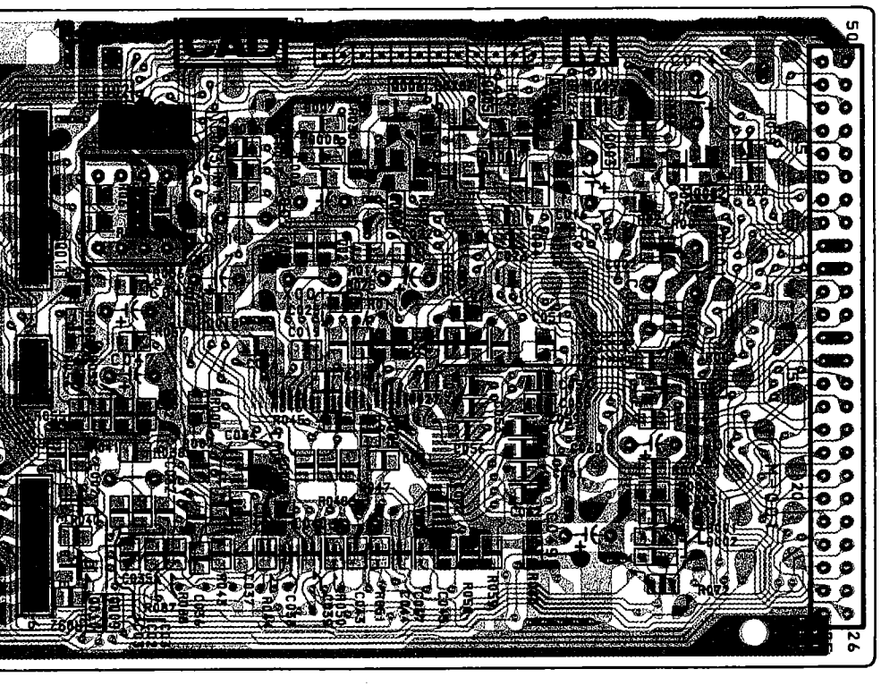
KP-46XBR25/53XBR25/61XBR28
RM-Y114A

M [MAIN CONTROL, μ-CON]

N [H. V]

– Board –





- ▒▒▒ : Pattern from the side which enables seeing.
- ▒▒▒ : Pattern of the rear side.

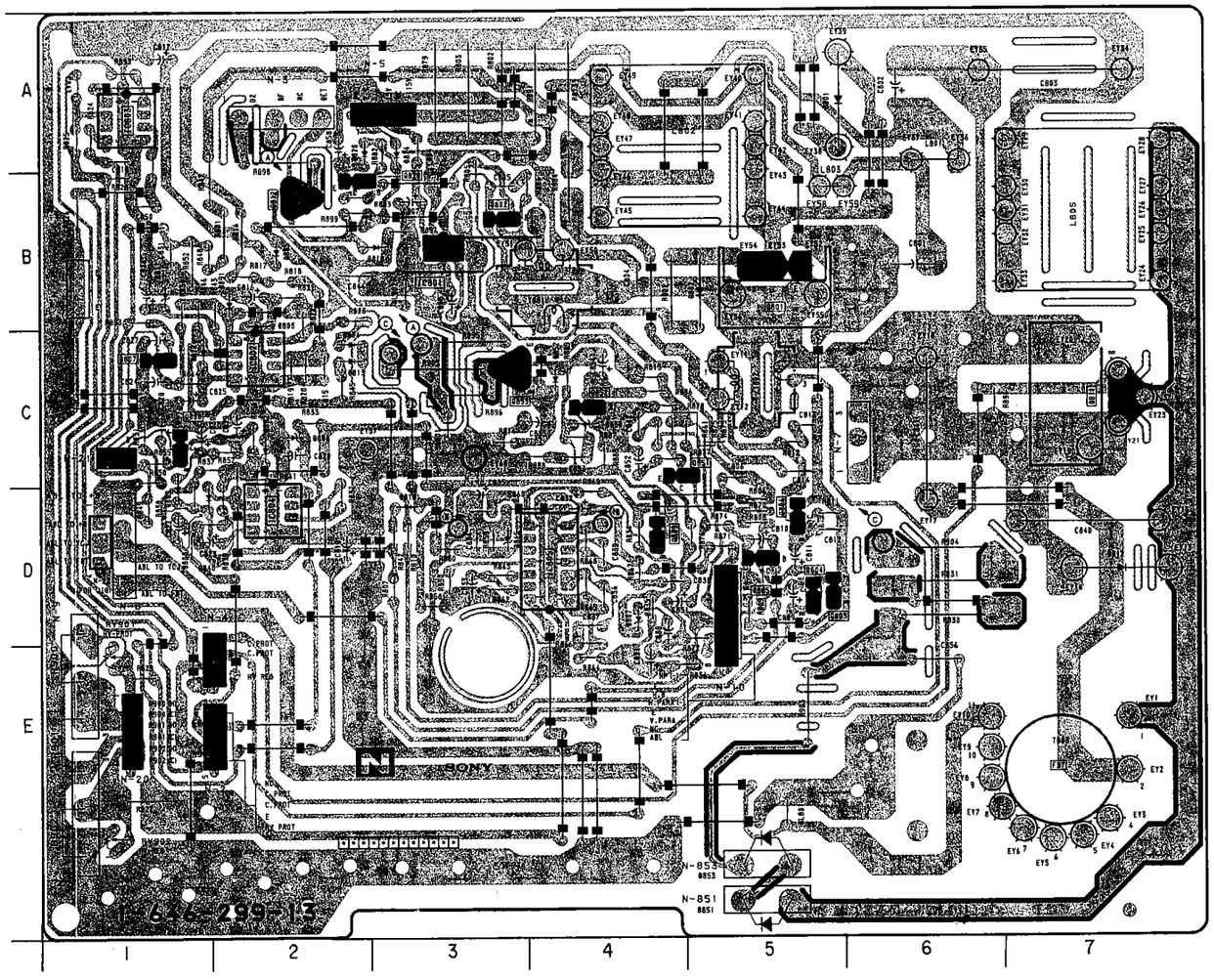
M Board

IC	
IC001	C-1
IC002	D-2, E-2

TRANSISTOR	
Q001	G-5
Q002	F-5
Q003	F-4
Q004	E-4
Q005	E-3
Q006	E-3
Q007	F-3
Q008	F-4
Q009	G-1
Q010	H-1
Q011	F-1
Q012	C-5
Q013	A-5
Q014	C-4

DIODE	
D001	H-5
D002	H-5
D003	F-4
D004	F-4
D005	D-3
D006	D-3
D007	E-3
D008	E-3
D009	F-1
D010	A-4
D011	D-2
D012	B-4
D014	A-1
D015	B-4

– N Board –

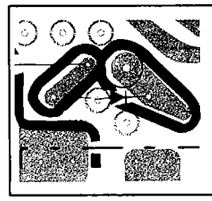


N Board

IC	
IC801	B-3
IC802	C-2
IC803	A-1
IC804	D-2
IC805	D-4

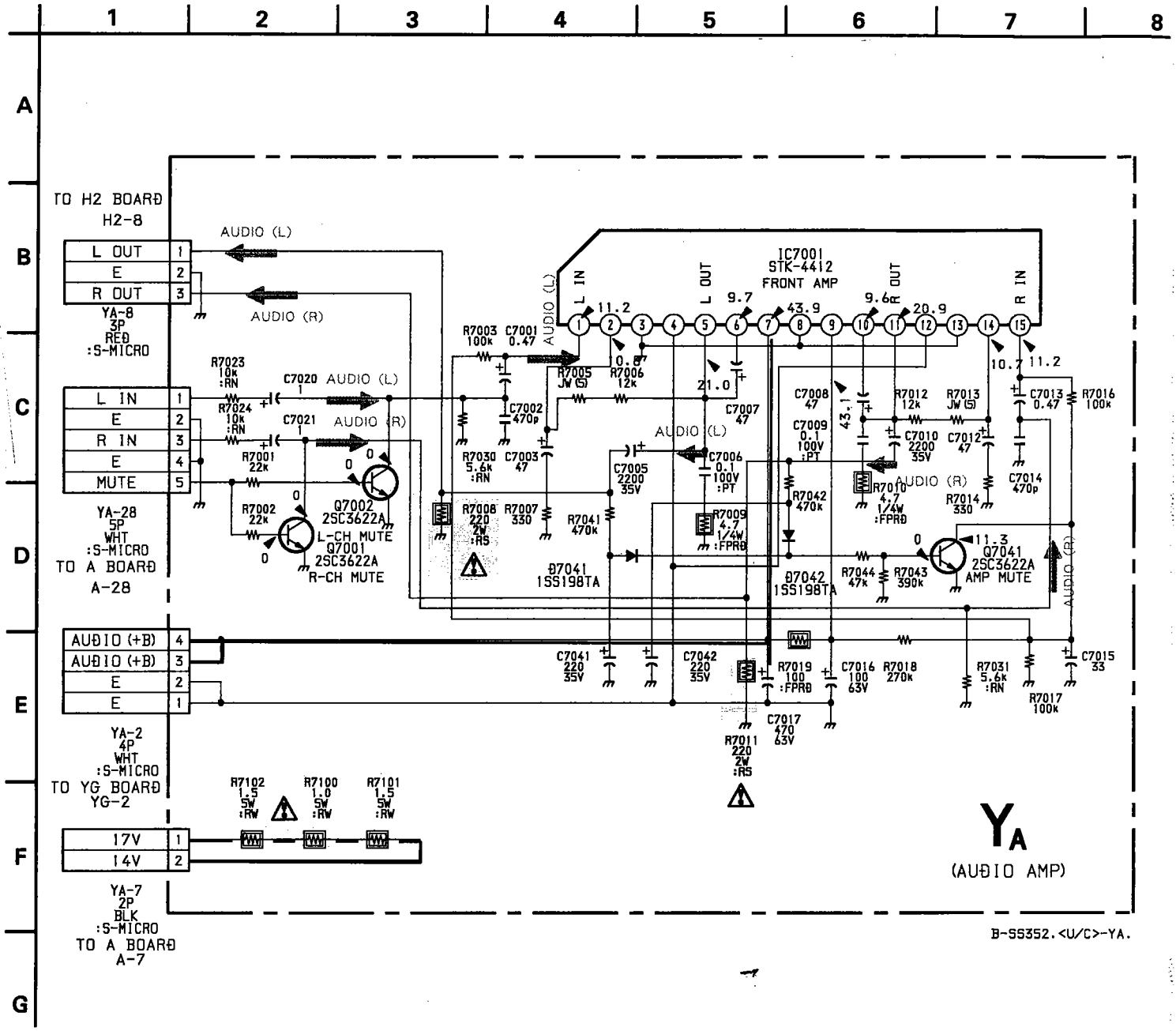
TRANSISTOR	
Q801	B-5
Q802	B-3
Q803	D-6
Q804	D-5
Q805	D-5
Q806	D-5
Q807	C-1
Q808	C-1
Q809	D-4
Q811	C-7
Q812	B-2
Q820	B-3
Q851	C-5
Q852	C-4
Q853	C-4

DIODE	
D801	A-6
D802	B-5
D803	B-2
D804	C-2
D805	B-2
D806	C-2
D807	D-4
D808	D-2
D809	D-1
D810	D-3
D811	B-1
D812	C-2
D813	C-2
D814	A-3
D815	D-3
D817	D-7
D818	B-3
D820	A-3
D850	C-4
D851	E-5
D852	C-4
D853	E-5
D891	B-2
D892	C-2

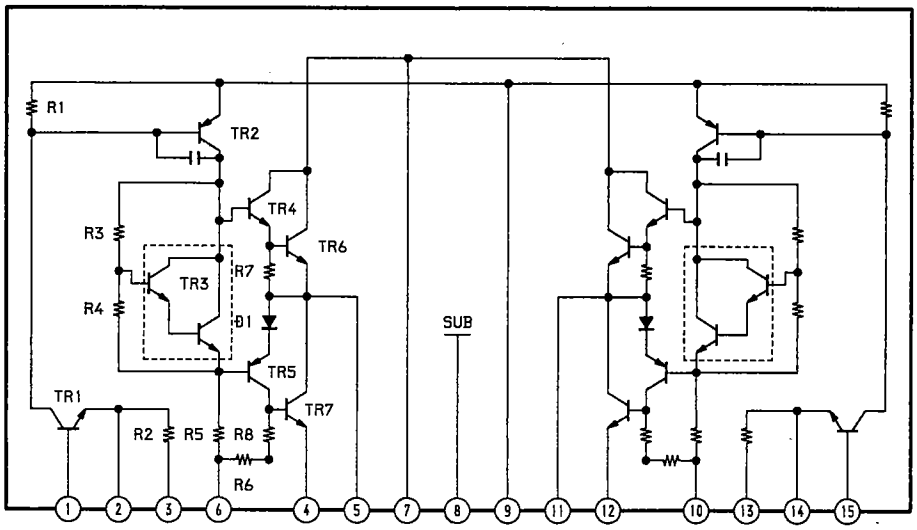


NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

(10) SCHEMATIC DIAGRAM OF YA BOARD

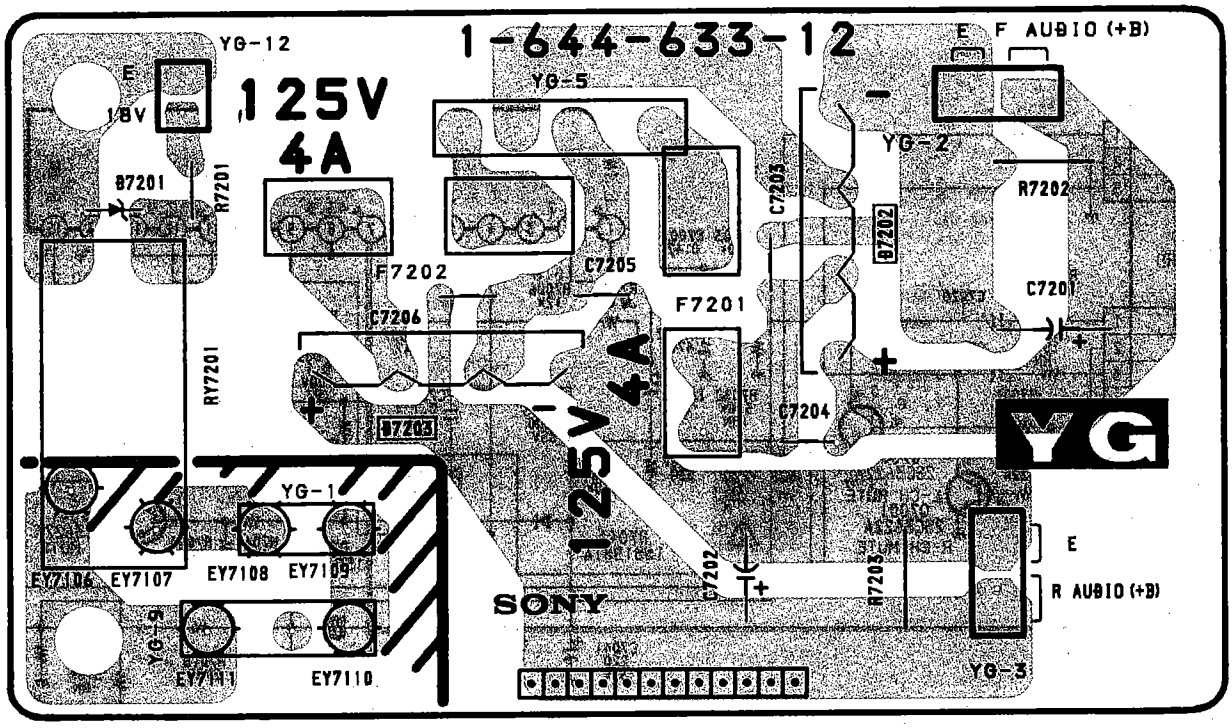


YA Board IC7001 STK4412



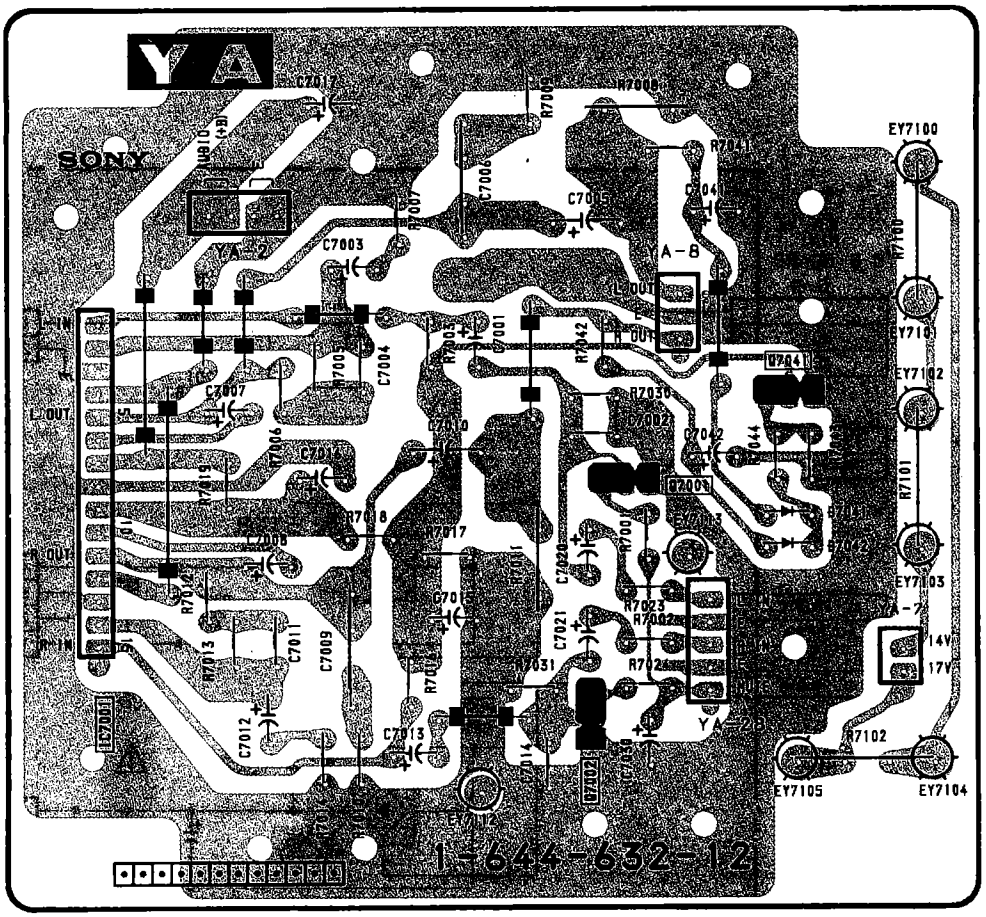
YG [POWER RECT]

– YG Board –

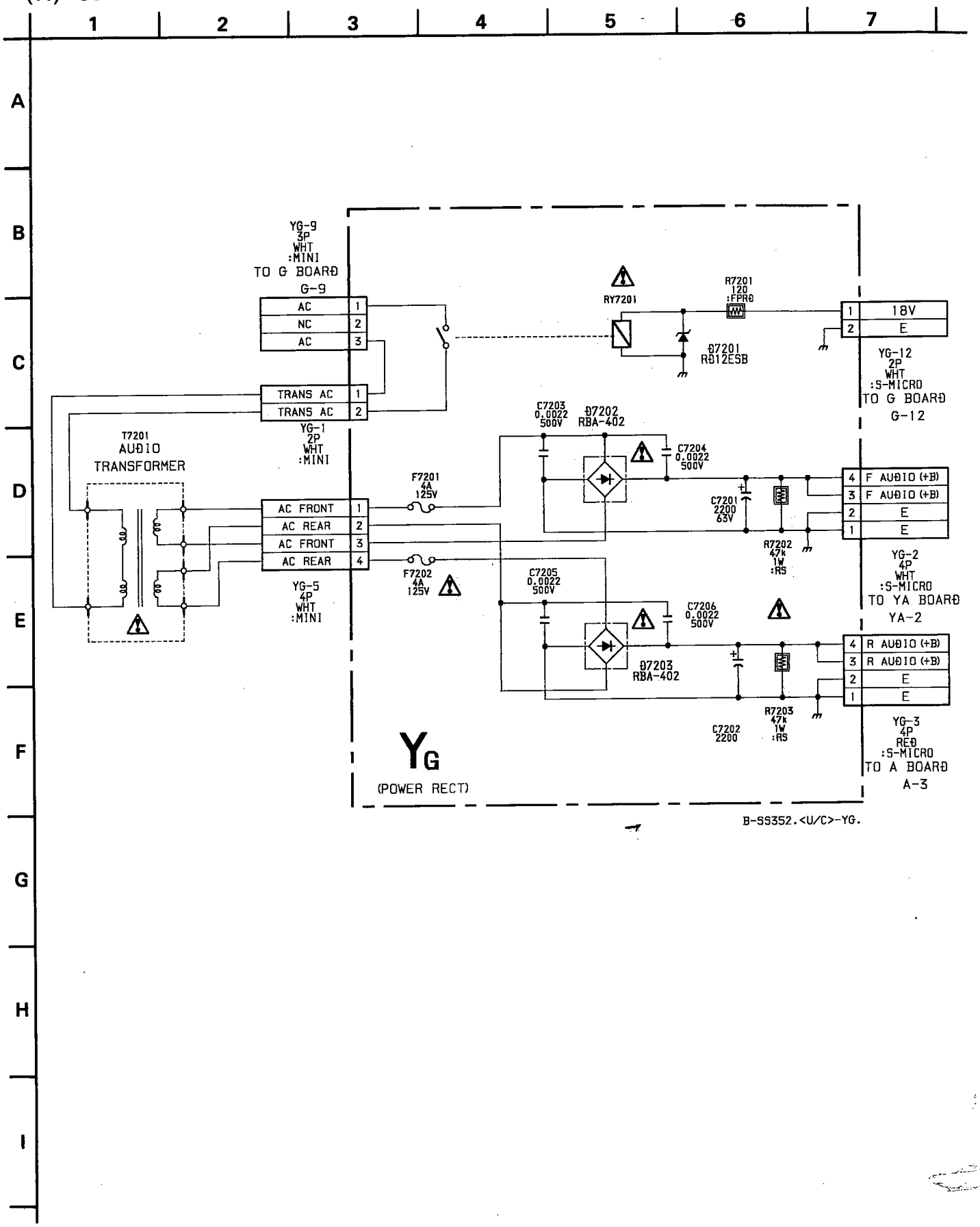


YA [AUDIO AMP]

– YA Board –

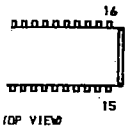


(11) SCHEMATIC DIAGRAM OF YG BOARD

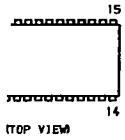


SEMICONDUCTORS

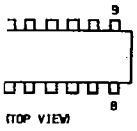
1387S



A1228S
A1268P



A1315M
A1315P
PD4053BC



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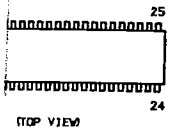
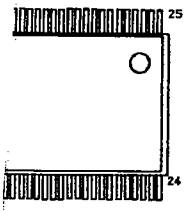
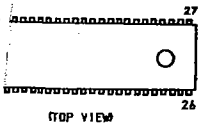


XA1545S



LC7458A-02



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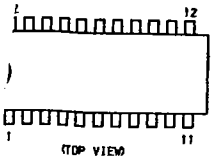

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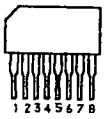
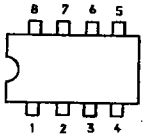


24C04AI/P
μPC393C
μPC4082C
μPC4557C
μPC4558C



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MB3614
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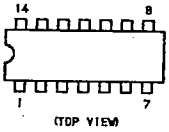

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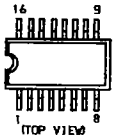

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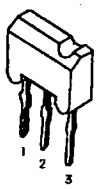

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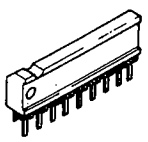
M5M4C500L-10



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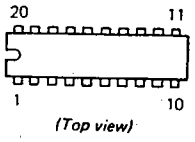

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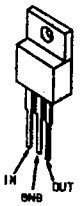

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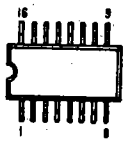

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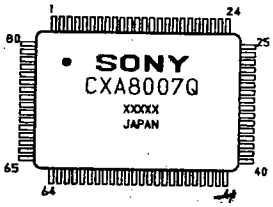

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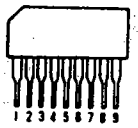

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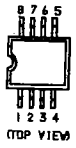

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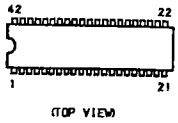

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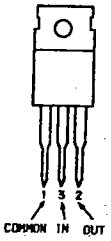
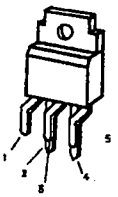


SI-3090CA



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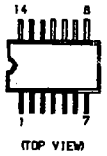

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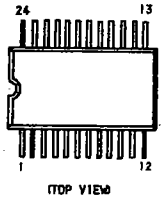
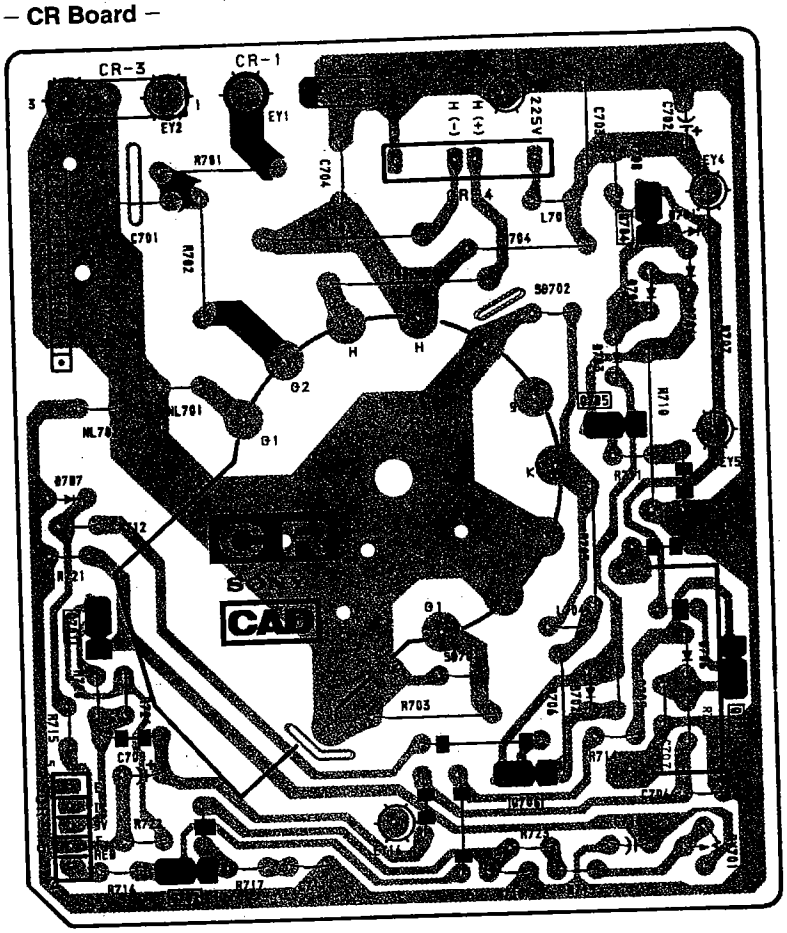


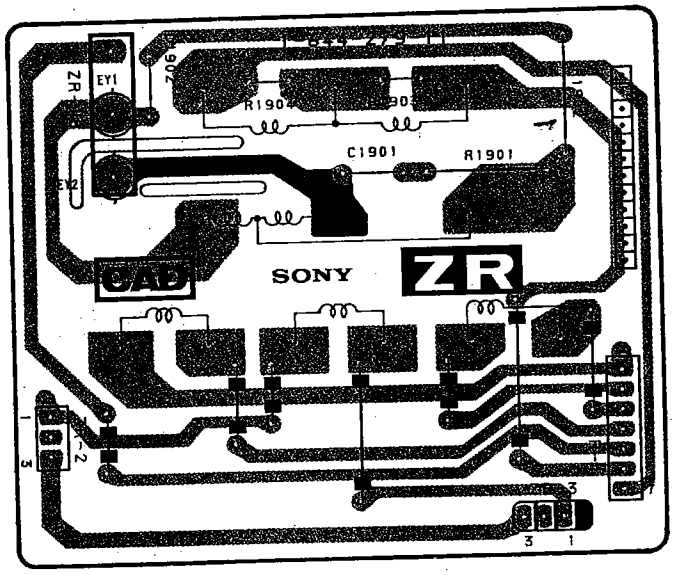
RBA-402

CR [R OUT] **ZR** [DY I/F]

– CR Board –



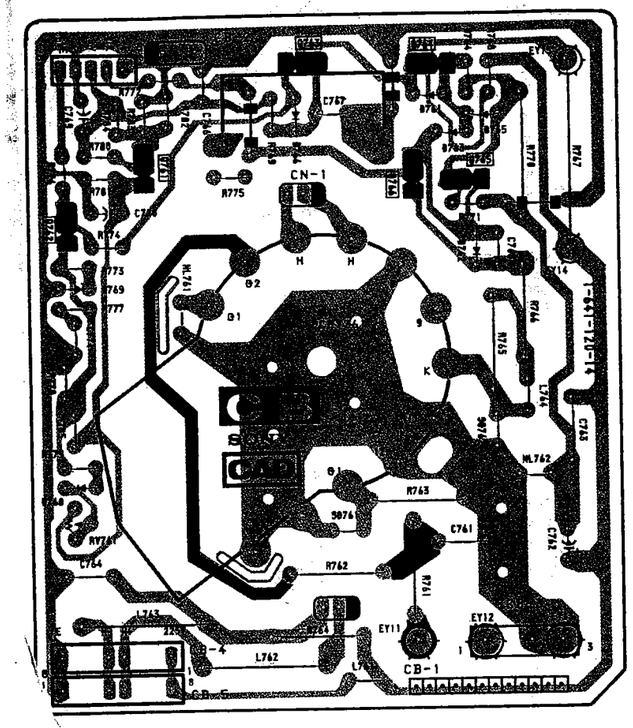
– ZR Board –



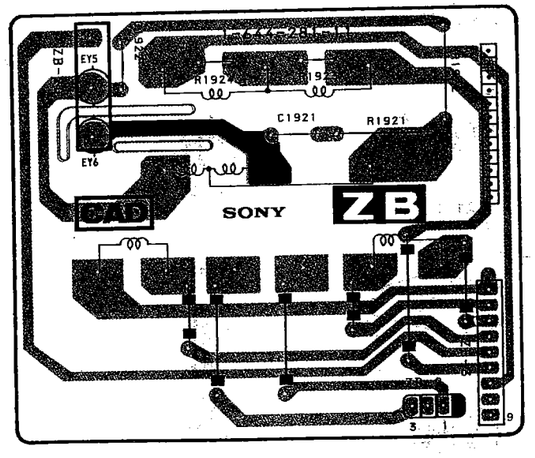
KP-46XBR25/53XBR25/61XBR28
RM-Y114A

CB [B OUT] ZB [DY I/F]

– CB Board –

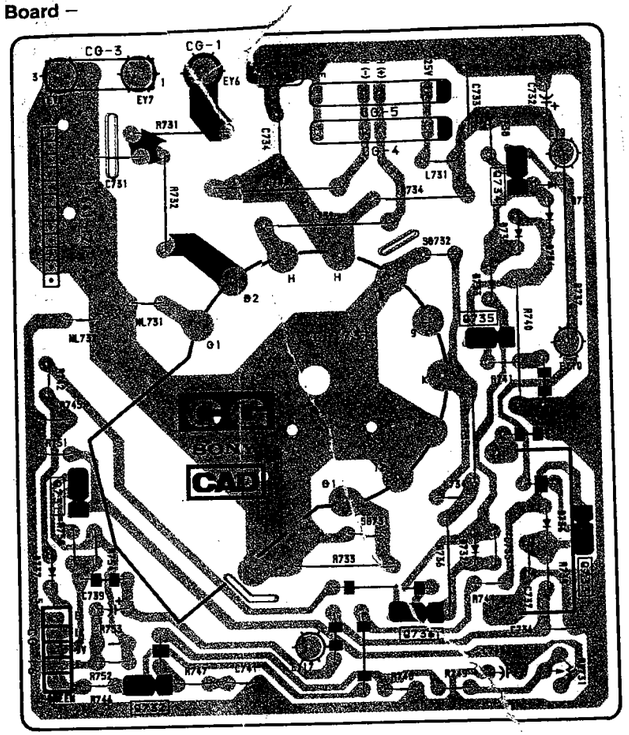


– ZB Board –

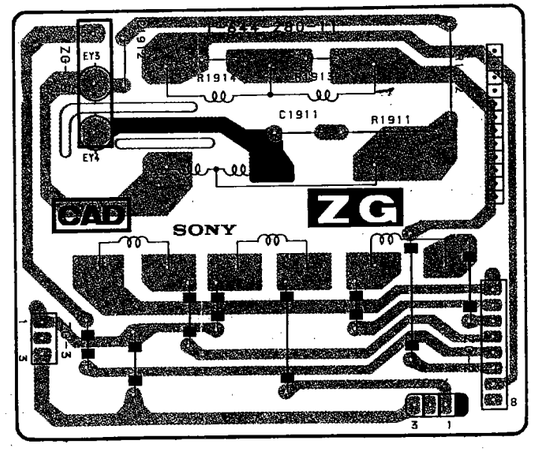


CG [G OUT] ZG [DY I/F]

– CG Board –



– ZG Board –

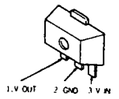


KP-46XBR25/53XBR25/61XBR28 RM-Y114A

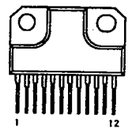
STK-4278L

STK4412

S-80743AL-A7-S



TA8216H



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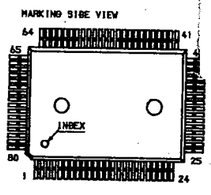
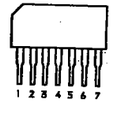
CXD1220AQ
TMC73C247-10

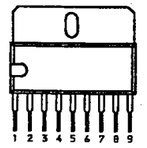


μPC1037HA

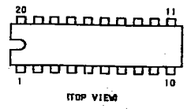


μPC78N05H

μPC1498H

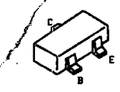


TA8184P



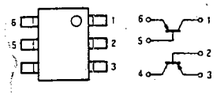
DTA124ES
DTC144ES
2SC3622A-LK

DTC144EK
2SA1037K-QR
2SA1162-G
2SC2412K-T-146-R
2SC2412K-QR
2SD601A-Q



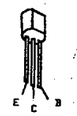
FMW1

XN4401



IMX3
IMZ1

2SA1013-O
2SA788-5
2SD7[illegible]1-O
2SA109[illegible]S
2SC255[illegible]-O



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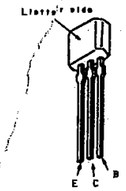
2SA1175-HFE
2SC3311A-Q
2SC2785-HFE



2SA1301-O

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2SC3298A-Y
2SC4793

2SB649A-C
2SC2611
2SC2688-LK
2SC3271-N

2SB861-C
2SB1015-Y
2SC3675
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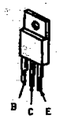

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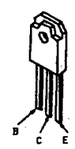

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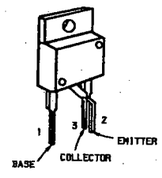
2SC4256CB



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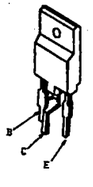
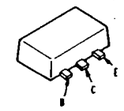
2SD2012

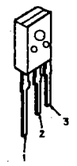
2SC4891-CA
2SD1887-CA



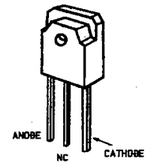
2SD874A-R



D10SC6M
D10SC6MR
D5KC40H



DD50R



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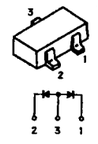
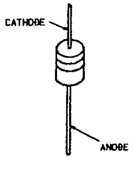
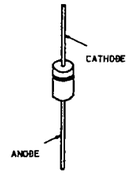


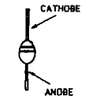
D1N20R
EGP10D
RB-100A
RD13ES-B2
RD18ES-B2
RD2.0ES-B1
RD24ES-B3
RD3.3ES-B2
RD3.9ES-B1
RD33ES-B2
RD39ES-B2
RD4.7ES-B2
RD5.1-B1
RD5.1ES-B2
RD5.6ES-B2
RD7.5ES-B1
RD9.1ES-B2
1SS119



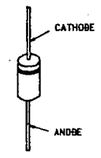
ERC06-15S
RU-1C
RU-2AM



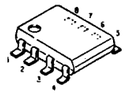
ERC38-06
V06C
V09G
V19E
V30N



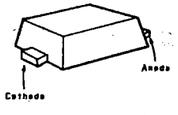
GP08D
ERD28-08S
RD12ES-B1
RD27FB2
SB140



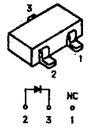
L78LR05D-MA



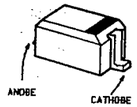
MA110
MA3130



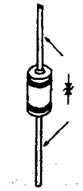
RD15M-B1
RD18M-B1
RD3.3M-B1
RD5.1M-B3
RD6.8M-B1



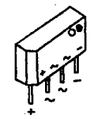
RD15S-B
RD5.6S-B
RD6.2S-B



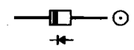
RD9.1E-W



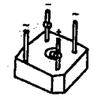
S1VB40



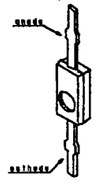
S3V10SB



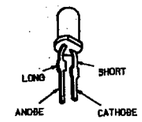
S5VB60



1T33



TLR124



SECTION 7
EXPLODED VIEWS

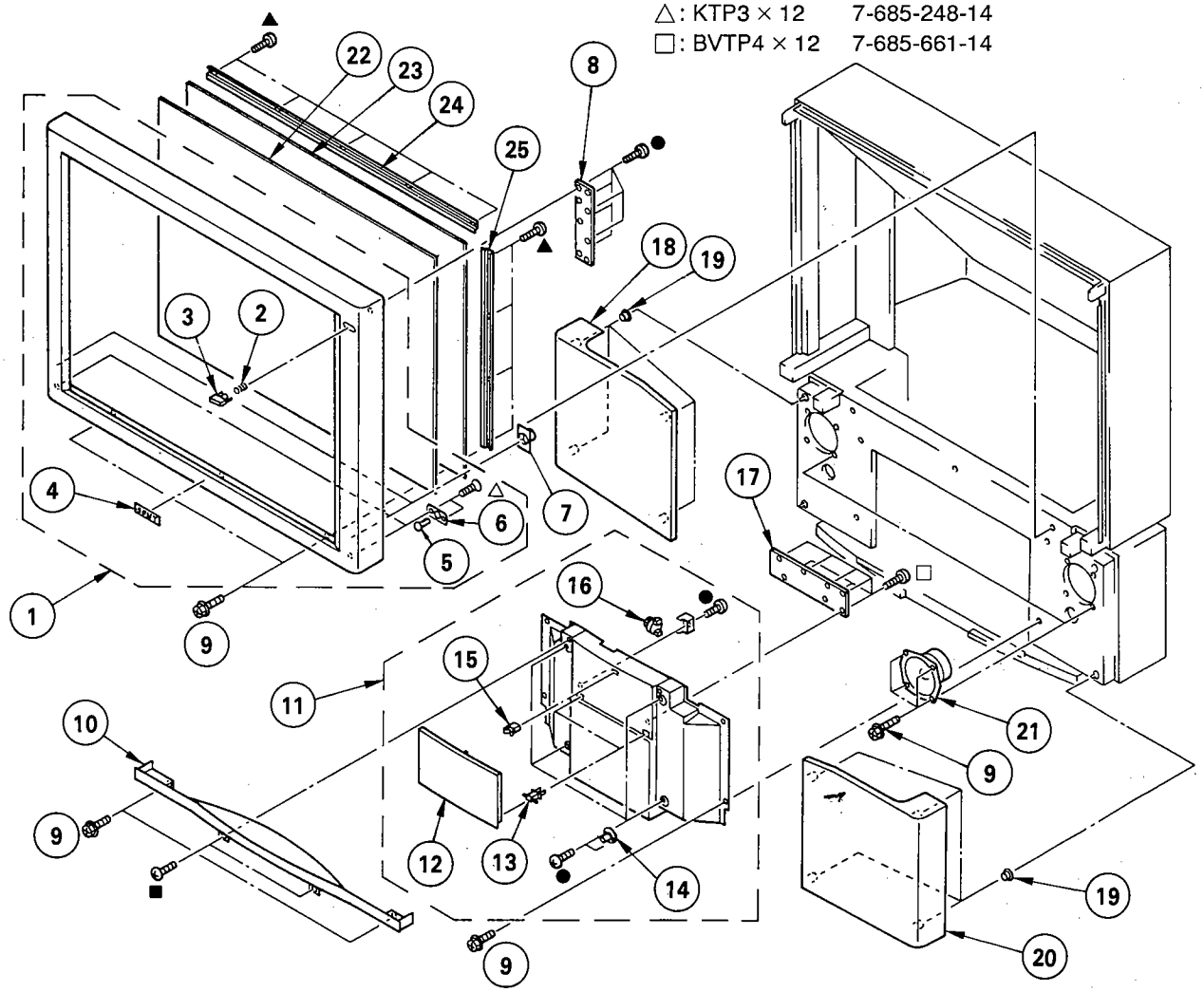
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

7-1-1. SCREEN FRAME AND CONTROL PANEL (KP-46XBR25 / 53XBR25 (US/CND))

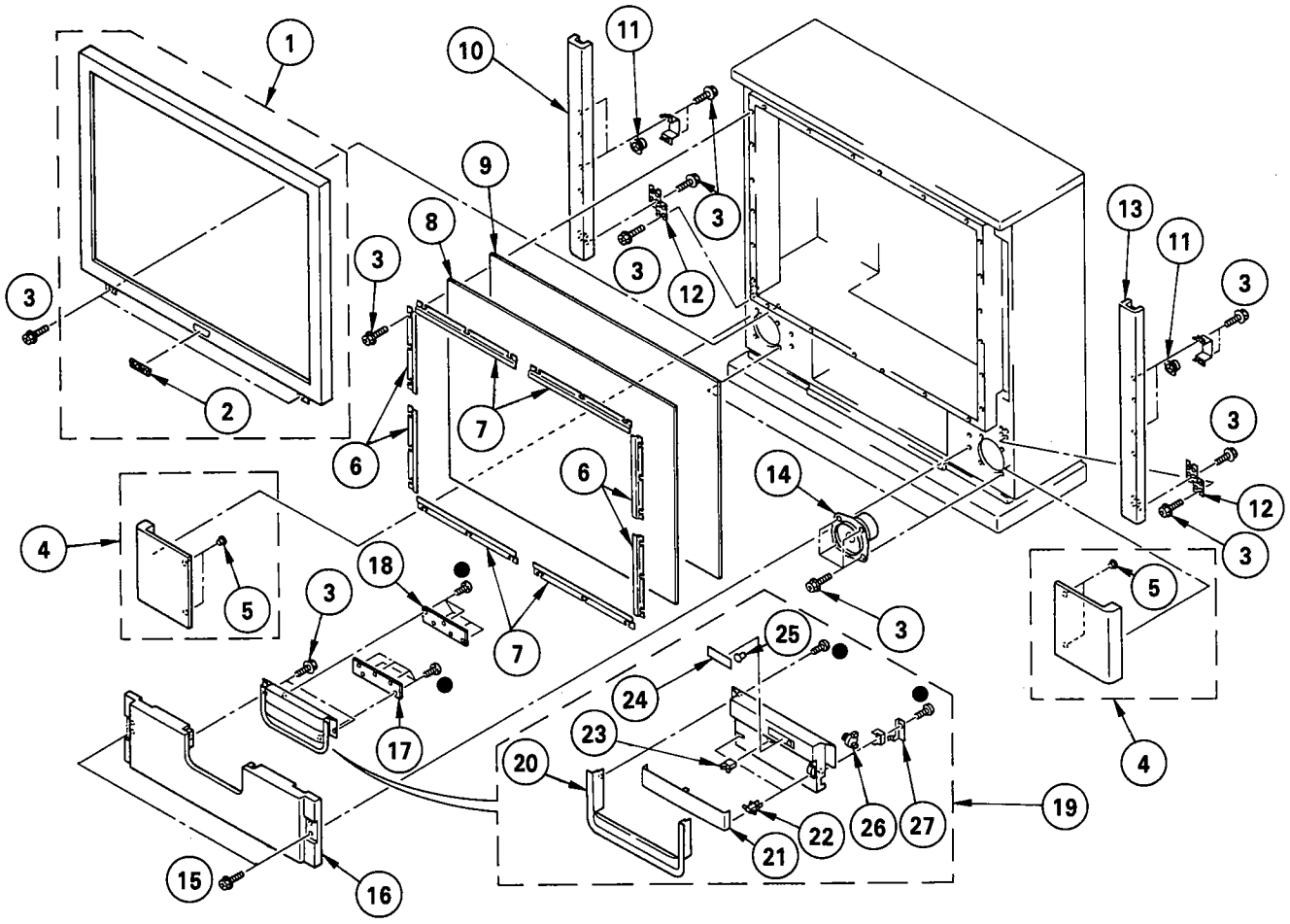
●: BVTP3 × 12 7-685-648-79
■: BVTP4 × 16 7-685-663-79
▲: BVTP4 × 12 7-685-661-79
△: KTP3 × 12 7-685-248-14
□: BVTP4 × 12 7-685-661-14



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4030-193-1	FRAME ASSY, SCREEN 2-6 (KP-46XBR25)	
1	X-4031-194-1	FRAME ASSY, SCREEN 2-6(KP-53XBR25(U/C))	
2	3-566-903-00	SPRING	
3	4-036-523-01	BUTTON, POWER	
4	4-381-079-01	EMBLEM (NO.10), SONY	
5	4-838-452-00	STRIKE	
6	4-838-453-00	SUPPORT	
7	1-544-580-21	SPEAKER (2.5CM)	
8	*1-643-591-11	H1 BOARD	
9	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
10	4-036-470-01	ESCUTCHEON, FRONT	
11	X-4030-571-1	PANEL ASSY, CONTROL(KP-46XBR25)	12-16
	X-4030-554-1	PANEL ASSY, CONTROL(KP-53XBR25(U/C))	12-16
12	4-036-461-01	LID, CONTROL	
13	3-703-035-11	SHAFT, LID	
14	4-843-806-00	STRIKE	
15	4-374-714-01	CATCH, PUSH	
16	3-721-204-21	DAMPER	
17	*1-643-592-11	H2 BOARD	
18	X-4030-553-1	GRILLE (L) ASSY, SPEAKER (KP-53XBR25(U/C))	
18	X-4030-570-1	GRILLE (L) ASSY, SPEAKER (KP-46XBR25)	
19	4-838-438-00	LATCH	
20	X-4030-552-1	GRILLE (R) ASSY, SPEAKER (KP-53XBR25(U/C))	
20	X-4030-569-1	GRILLE (R) ASSY, SPEAKER (KP-46XBR25)	
21	1-504-141-11	SPEAKER (13CM)	
22	4-036-466-11	PLATE (L), SIFFUSION (KP-53XBR25(U/C))	
22	4-037-360-11	PLATE (L), SIFFUSION (KP-46XBR25)	
23	4-036-469-11	PLATE (F), SIFFUSION (KP-53XBR25(U/C))	
23	4-037-359-11	PLATE (F), SIFFUSION (KP-46XBR25)	
24	*4-036-091-11	HOLDER (L), SCRREN (KP-53XBR25(U/C))	
24	*4-036-091-21	HOLDER (L), SCRREN (KP-46XBR25)	
25	*4-036-092-11	HOLDER (S), SCRREN (KP-53XBR25(U/C))	
25	*4-036-092-21	HOLDER (S), SCRREN (KP-46XBR25)	

7-1-2. SCREEN FRAME AND CONTROL PANEL (KP-61XBR28)

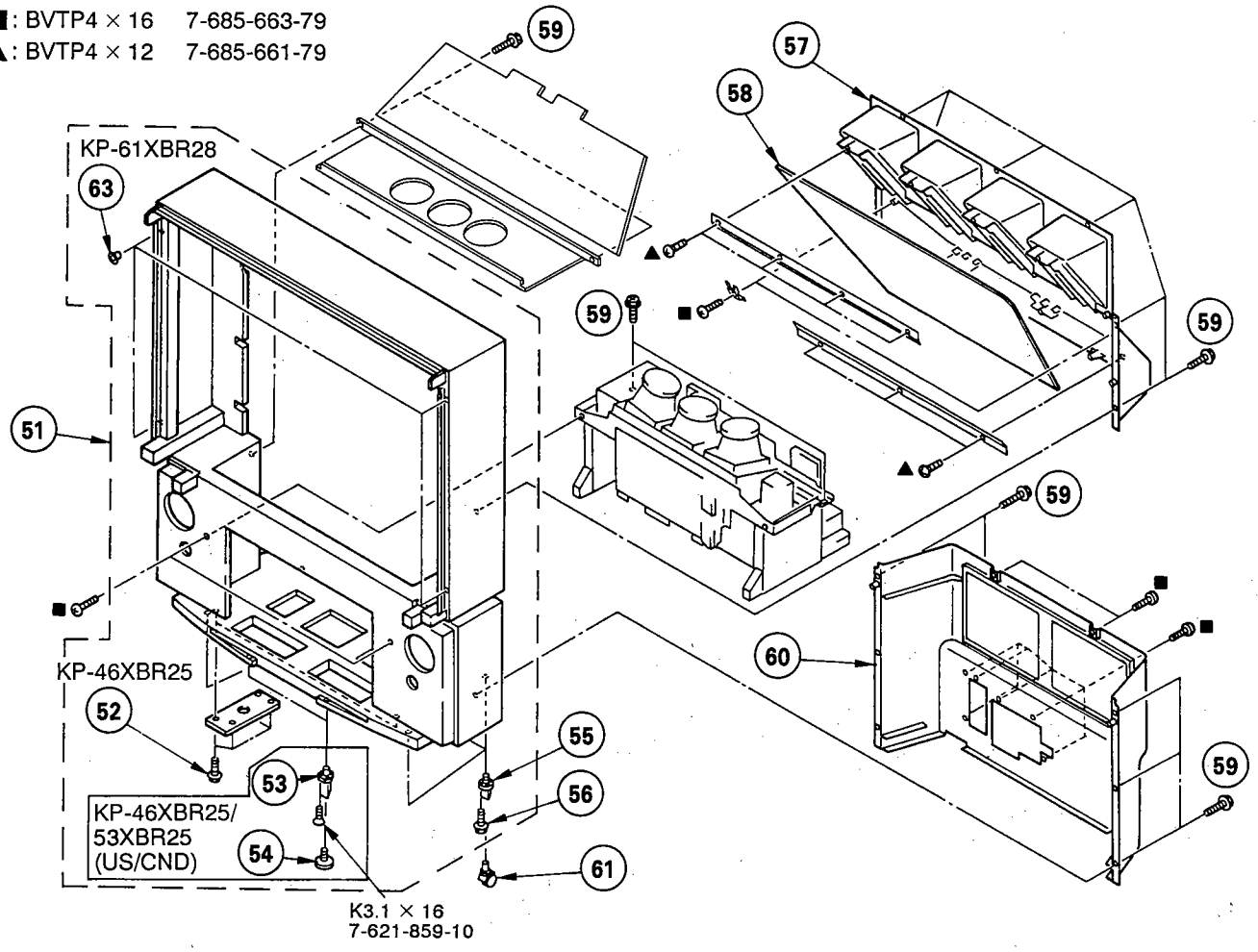
●: BVTP3 × 12 7-685-648-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4031-177-1	FRAME ASSY, SCREEN	2
2	4-381-079-01	EMBLEM (NO.10), SONY	
3	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
4	X-4031-175-1	GRILLE (B) ASSY, SPEAKER	5
5	4-838-438-00	LATCH	
6	*4-040-122-01	HOLDER (S), SCREEN	
7	*4-040-120-01	HOLDER (L), SCREEN	
8	4-040-124-11	PLATE (L), DIFFUSION	
9	4-040-123-11	PLATE (F), DIFFUSION	
10	X-4031-174-1	GRILLE (T/L) ASSY, SPEAKER	
11	1-504-312-11	SPEAKER (SQUAWKER) (5CM)	
12	*4-040-600-01	BRACKET, SPEAKER GRILLE	
13	X-4031-173-1	GRILLE (T/R) ASSY, SPEAKER	
14	1-504-313-11	SPEAKER (16CM)	
15	4-378-522-21	SCREW, TAPPING, HEXAGON HEAD	
16	4-040-581-01	PANEL, FRONT	
17	*1-643-592-11	H2 BOARD	
18	*1-643-591-11	H1 BOARD	
19	X-4031-179-1	PANEL ASSY, CONTROL	20-27
20	4-040-584-01	COVER, EDGE	
21	4-036-511-21	LID, CONTROL	
22	3-703-035-11	SHAFT, LID	
23	4-374-714-01	CATCH, PUSH	
24	4-036-510-21	PANEL, INDICATOR	
25	*4-374-987-01	GUIDE, LIGHT	
26	3-720-417-01	DAMPER, OIL	
27	4-036-513-01	SPRING, LID	

7-2. CABINET

■: BVTP4 × 16 7-685-663-79
▲: BVTP4 × 12 7-685-661-79



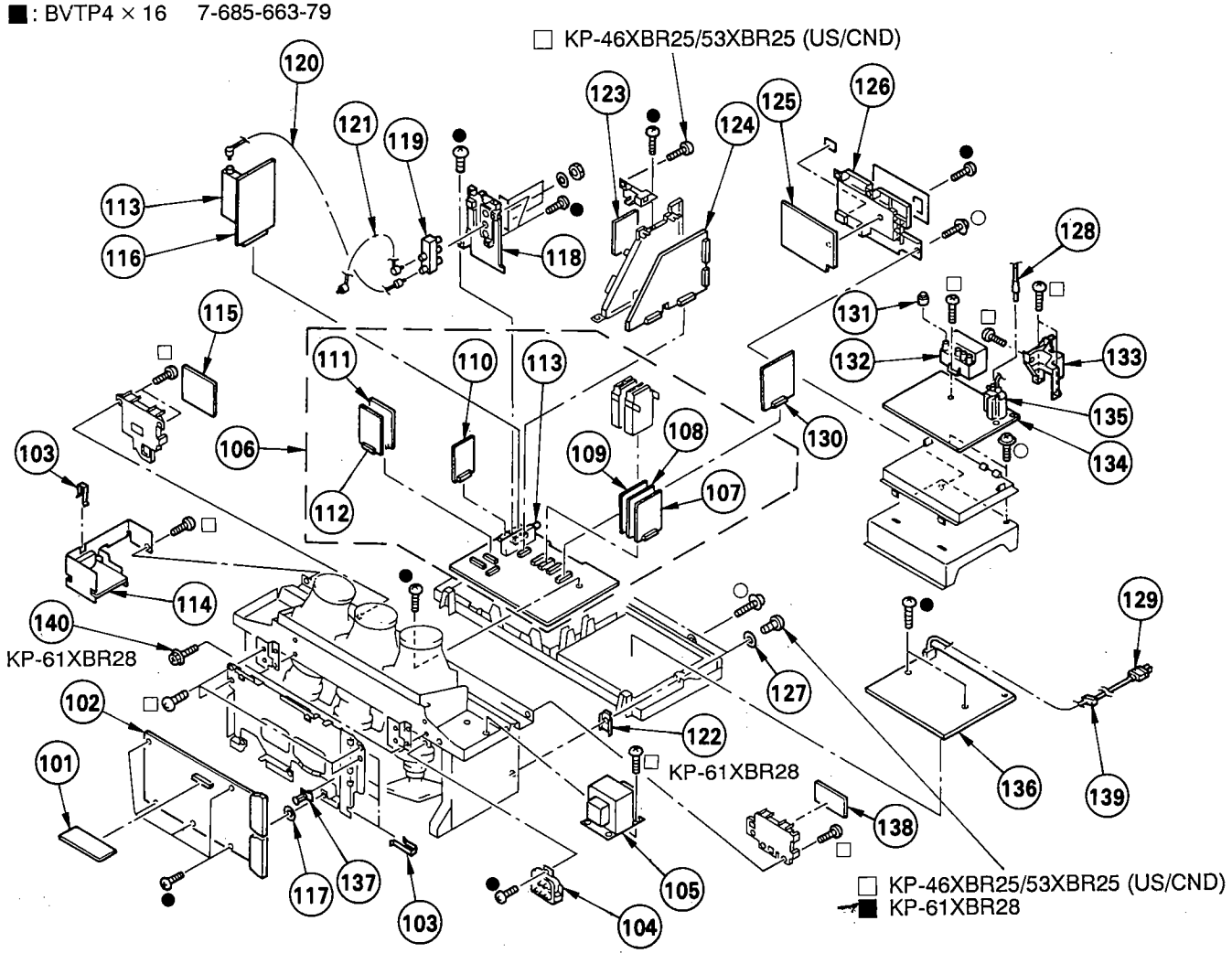
REF.NO.	PART NO.	DESCRIPTION	REMARK
51	*X-4031-084-1	CABINET ASSY 52-56	(KP-46XBR25)
51	*X-4031-176-1	CABINET ASSY 55,56,63	(KP-61XBR28)
51	*X-4031-198-1	CABINET ASSY 53-56	(KP-53XBR25(U/C))
52	4-378-522-21	SCREW, TAPPING, HEXAGON HEAD	(KP-46XBR25)
53	4-037-473-01	NUT, FITTING	(KP-46XBR25/53XBR25(U/C))
54	4-037-472-02	LEG, ADJUSTABLE	(KP-46XBR25/53XBR25(U/C))
55	4-030-850-01	SOCKET, CASTER	
56	4-378-522-01	SCREW, TAPPING, HEXAGON HEAD	
57	4-036-462-01	COVER (46"), MIRROR	(KP-46XBR25)
57	4-036-474-01	COVER (53"), MIRROR	(KP-53XBR25(U/C)/61XBR28)
58	4-040-713-01	MIRROR, REFLECTION	(KP-61XBR28)
59	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
60	X-4030-549-1	COVER ASSY, BACK	
61	4-032-343-11	CASTER	(KP-46XBR28/53XBR25(U/C))
61	4-040-508-01	CASTER	(KP-61XBR28)
63	4-838-438-00	LATCH	(KP-61XBR28)

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

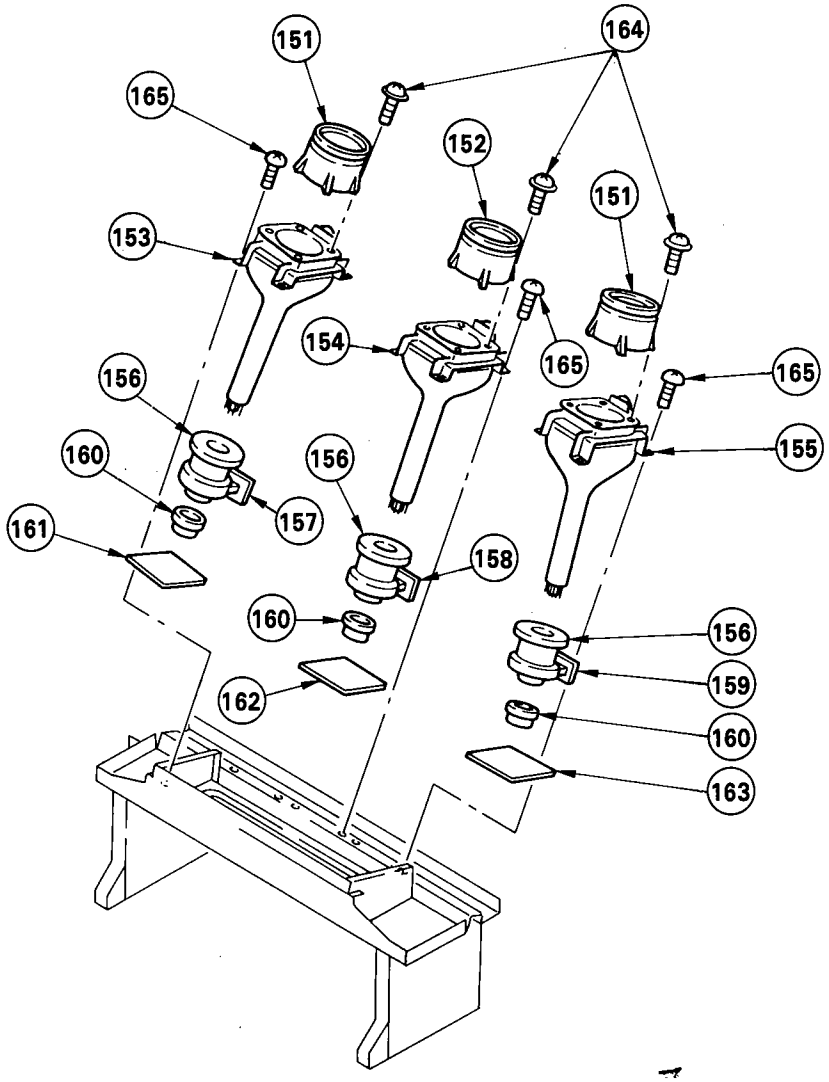
7-3. CHASSIS

●: BVTP3 × 12 7-685-648-79
□: BVTP4 × 12 7-685-661-14
○: PSW4 × 14 7-682-663-09
■: BVTP4 × 16 7-685-663-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
101	*1-644-278-11	DS BOARD	
102	*A-1346-117-A	D BOARD, COMPLETE	
103	*4-393-401-11	SPRING, TRANSISTOR	
104	⚠1-241-744-11	RESISTOR ASSY (HIGH-VOLTAGE)	
105	⚠1-423-311-11	TRANSFORMER, POWER	
106	*A-1297-104-A	A BOARD, COMPLETE	107-112 (KP-53XBR25 (U/C))
106	*A-1297-105-A	A BOARD, COMPLETE	107-112 (KP-46XBR25/61XBR28)
107	*A-1346-138-A	E1 BOARD, COMPLETE	
108	*A-1346-136-A	E2 BOARD, COMPLETE	
109	*A-1306-435-A	M BOARD, COMPLETE	
110	*A-1195-067-A	P2 BOARD, COMPLETE	
111	*A-1394-446-A	X3 BOARD, COMPLETE	
112	*A-1394-442-A	Y2 BOARD, COMPLETE	
113	⚠1-693-102-22	TUNER (BTF-XA401)	
114	*1-644-632-11	YA BOARD	
115	*A-1394-421-A	S BOARD, COMPLETE	
116	*A-1195-069-A	P3 BOARD, COMPLETE	
117	4-866-147-00	WASHER	
118	4-036-137-03	PANEL, SUB CONNECTOR	
119	1-417-178-11	SELECTOR, ANTENNA (AS-2)	
120	*1-557-056-31	CABLE, P-P	
121	*1-555-400-00	CABLE, PIN	
122	*4-040-160-01	SPACER	(KP-61XBR28)
123	*A-1195-065-A	P4 BOARD, COMPLETE	
124	*A-1394-429-A	U BOARD, COMPLETE	
125	*A-1394-434-A	UT BOARS, COMPLETE	
126	4-036-138-11	PANEL, MAIN CONNECTOR	
127	4-039-112-01	WASHER, WAVE	
128	⚠1-559-865-41	LEAD ASSY, HIGH-VOLTAGE	
129	⚠1-696-002-11	CORD, POWER(WITH NOISE FILTER)	
130	*A-1342-214-A	V BOARD, COMPLETE	
131	4-373-137-01	CAP (Z), RUBBER	
132	⚠1-453-108-11	DC BLOCK, HIGH-VOLTAGE	
133	4-034-482-01	COVER, FBT	
134	*A-1390-351-A	N BOARD, COMPLETE	
135	⚠1-453-121-11	TRANSFORMER ASSY, FLYBACK (NX-2630B4)	
136	*A-1316-149-A	G BOARD, COMPLETE	
137	*3-670-570-21	SPACER, SUPPORT	
138	*1-644-633-11	YG BOARD	
139	4-388-328-11	GROMMET, AC CORD	
140	4-378-522-01	SCREW, TAPPING, HEXAGON HEAD(KP-61XBR28)	

7-4. PICTURE TUBE



REF.NO.	PART NO.	DESCRIPTION	REMARK
151	4-034-057-01	LENS (LINNIT) (KP-46XBR28/53XBR25(U/C))	
151	4-040-131-01	LENS (LINNIT POINT 6) (KP-61XBR28)	
152	4-034-057-01	LENS (LINNIT) (KP-46XBR28/53XBR25(U/C))	
152	4-040-131-11	LENS (LINNIT POINT 6) (KP-61XBR28)	
153	⚠8-736-633-05	PICTURE TUBE 07MK2(R) (SD-249) (KP-46XBR25/53XBR25(U/C))	
153	⚠8-736-641-05	PICTURE TUBE 07MK2(R) (SD-249) (KP-61XBR28)	
154	⚠8-736-631-05	PICTURE TUBE 07MK3(G)(SD-249) (KP-46XBR25/53XBR25(U/C))	
154	⚠8-736-634-05	PICTURE TUBE 07MK3(G)(SD-249) (KP-61XBR28)	
155	⚠8-736-632-05	PICTURE TUBE 07MK2(B) (SD-249) (KP-46XBR25/53XBR25(U/C))	
155	⚠8-736-640-05	PICTURE TUBE 07MK2(B) (SD-249) (KP-61XBR28)	
156	⚠1-451-396-21	DEFLECTION YOKE (Y936PA)	
157	*A-1390-340-A	ZR BOARD, COMPLETE	
158	*A-1390-346-A	ZG BOARD, COMPLETE	
159	*A-1390-347-A	ZB BOARD, COMPLETE	
160	.1-452-443-13	NECK ASSY, PICTURE TUBE (NA367)	
161	*A-1331-259-A	CR BOARD, COMPLETE	
162	*A-1331-260-A	CG BOARD, COMPLETE	
163	*A-1331-261-A	CB BOARD, COMPLETE	
164	3-701-810-91	SCREW, TERMINAL	
165	3-703-251-01	SCREW TP4X12 +PWH	

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

P4

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

- The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- ※ : Selected to yield optimum performance.

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1195-065-A	P4 BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C1201	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1202	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	
C1203	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	
C1204	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	
C1205	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C1206	1-163-093-00	CERAMIC CHIP 10PF	5%	50V	
C1207	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1208	1-163-237-11	CERAMIC CHIP 27PF	5%	50V	
C1210	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	
C1211	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1213	1-126-154-11	ELECT 47MF	20%	6.3V	
C1214	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1215	1-126-154-11	ELECT 47MF	20%	6.3V	
C1216	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1217	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1218	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1219	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1220	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1221	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1222	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1223	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1224	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1225	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1226	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1227	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1228	1-126-154-11	ELECT 47MF	20%	6.3V	
C1229	1-126-157-11	ELECT 10MF	20%	6.3V	
C1230	1-126-157-11	ELECT 10MF	20%	6.3V	
C1231	1-126-157-11	ELECT 10MF	20%	6.3V	
C1232	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1233	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1234	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1235	1-124-257-00	ELECT 2.2MF	20%	50V	
C1237	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1238	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1239	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1240	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	
C1241	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	
C1242	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	
C1243	1-126-177-11	ELECT 100MF	20%	6.3V	
C1245	1-126-157-11	ELECT 10MF	20%	6.3V	
C1246	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1249	1-126-157-11	ELECT 10MF	20%	6.3V	
C1250	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1251	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1252	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1253	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1254	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1255	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1256	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	
		<FILTER>			
FL1201	1-239-550-11	FILTER, LOW PASS			
FL1202	1-239-550-11	FILTER, LOW PASS			
FL1203	1-239-550-11	FILTER, LOW PASS			
		<IC>			
IC1201	8-752-352-20	IC CXD2023Q			
IC1202	8-752-062-80	IC CXA1686M			
IC1203	8-759-112-06	IC UPC78N05H			
IC1204	8-759-112-06	IC UPC78N05H			
		<COIL>			
L1201	1-408-423-00	INDUCTOR 150UH			
L1202	1-414-042-21	INDUCTOR 18UH			
L1205	1-414-042-21	INDUCTOR 18UH			
		<CONNECTOR>			
P4-32	*1-564-522-11	PLUG, CONNECTOR 7P			
		<TRANSISTOR>			
Q1202	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1203	8-729-216-22	TRANSISTOR 2SA1162-G			
Q1204	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1205	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1206	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1207	8-729-216-22	TRANSISTOR 2SA1162-G			
Q1208	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1209	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1211	8-729-216-22	TRANSISTOR 2SA1162-G			
Q1212	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1213	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1214	8-729-216-22	TRANSISTOR 2SA1162-G			
Q1215	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1218	8-729-216-22	TRANSISTOR 2SA1162-G			
Q1220	8-729-901-01	TRANSISTOR DTC144EK			
		<RESISTOR>			
R1201	1-216-049-00	METAL GLAZE 1K	5%	1/10W	
R1202	1-216-001-00	METAL GLAZE 10	5%	1/10W	
R1203	1-216-025-00	METAL GLAZE 100	5%	1/10W	
R1204	1-216-630-11	METAL CHIP 130	0.50%	1/10W	
R1205	1-216-639-11	METAL CHIP 330	0.50%	1/10W	

P4 P3

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1206	1-216-620-11	METAL CHIP	51	0.50%	1/10W	
R1207	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1208	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1209	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R1210	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1211	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1212	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1213	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1214	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1215	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1216	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1217	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1218	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R1219	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R1220	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R1221	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R1222	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R1223	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1224	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1225	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	
R1226	1-216-666-11	METAL CHIP	4.3K	0.50%	1/10W	
R1228	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1229	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1230	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1231	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1232	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R1233	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1234	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1235	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1238	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1239	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1241	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1242	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1243	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R1244	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1245	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1246	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1247	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1248	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R1249	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1250	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1251	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1252	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1253	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1254	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1255	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R1256	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1257	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R1258	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1259	1-216-644-11	METAL CHIP	510	0.50%	1/10W	
R1260	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1261	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1262	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1263	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1264	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1265	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1266	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1267	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1268	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1269	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1270	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1273	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1274	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1276	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1284	1-216-025-00	METAL GLAZE	100	5%	1/10W	

<CRYSTAL>

X1201	1-577-611-11	OSCILALTOR, CERAMIC	
X1202	1-567-878-11	VIBRATOR, CRYSTAL	

****

*A-1195-069-A P3 BOARD, COMPLETE
****

<CAPACITOR>

C2001	1-124-910-11	ELECT	47MF	20%	50V	
C2002	1-124-910-11	ELECT	47MF	20%	50V	
C2003	1-124-119-00	ELECT	330MF	20%	16V	
C2004	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C2005	1-124-261-00	ELECT	10MF	20%	50V	
C2006	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C2007	1-126-157-11	ELECT	10MF	20%	16V	
C2008	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2009	1-163-157-00	FILM	0.022MF	5%	50V	
C2010	1-164-161-11	CERAMIC CHIP	0.0022MF		50V	
C2011	1-126-157-11	ELECT	10MF	20%	16V	
C2013	1-126-301-11	ELECT	1MF	20%	50V	
C2014	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C2015	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C2016	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C2017	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C2018	1-124-465-00	ELECT	0.47MF	20%	50V	
C2019	1-126-103-11	ELECT	470MF	20%	16V	
C2020	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2021	1-126-157-11	ELECT	10MF	20%	16V	
C2022	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C2023	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C2024	1-124-465-00	ELECT	0.47MF	20%	50V	
C2025	1-126-157-11	ELECT	10MF	20%	16V	
C2026	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C2027	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	
C2028	1-163-107-00	CERAMIC CHIP	39PF	5%	50V	
C2029	1-124-477-11	ELECT	47MF	20%	16V	
C2031	1-124-910-11	ELECT	47MF	20%	50V	
C2032	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C2034	1-126-157-11	ELECT	10MF	20%	16V	
C2035	1-126-157-11	ELECT	10MF	20%	16V	
C2036	1-163-025-11	CERAMIC CHIP	0.001MF		50V	
C2037	1-124-477-11	ELECT	47MF	20%	16V	
C2038	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C2039	1-124-477-11	ELECT	47MF	20%	16V	
C2040	1-124-903-11	ELECT	1MF	20%	50V	
C2041	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C2042	1-124-902-00	ELECT	0.47MF	20%	50V	
C2043	1-136-161-00	FILM	0.047MF	5%	50V	
C2044	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2045	1-126-157-11	ELECT	10MF	20%	16V	
C2046	1-136-169-00	FILM	0.22MF	5%	50V	
C2047	1-124-463-00	ELECT	0.1MF	20%	50V	
C2048	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2049	1-136-165-00	FILM	0.1MF	5%	50V	
C2050	1-124-902-00	ELECT	0.47MF	20%	50V	
C2051	1-126-157-11	ELECT	10MF	20%	16V	
C2052	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	
C2053	1-163-093-00	CERAMIC CHIP	10PF	5%	50V	

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P3

REF.NO.	PART NO.	DESCRIPTION			REMARK
C2054	1-163-093-00	CERAMIC CHIP	10PF	5% 50V	
C2055	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C2056	1-136-161-00	FILM	0.047MF	5% 50V	
C2057	1-124-477-11	ELECT	47MF	20% 16V	
C2058	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C2059	1-136-177-00	FILM	1MF	5% 50V	
C2060	1-136-153-00	FILM	0.01MF	5% 50V	
C2061	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C2062	1-163-095-00	CERAMIC CHIP	12PF	5% 50V	
C2063	1-163-101-00	CERAMIC CHIP	22PF	5% 50V	
C2064	1-164-161-11	CERAMIC CHIP	0.0022MF	10% 50V	
C2065	1-126-320-11	ELECT	10MF	20% 16V	
C2066	1-126-157-11	ELECT	10MF	20% 16V	
C2067	1-126-157-11	ELECT	10MF	20% 16V	
C2068	1-124-916-11	ELECT	22MF	20% 50V	
C2070	1-163-253-11	CERAMIC CHIP	120PF	5% 50V	
C2073	1-124-477-11	ELECT	47MF	20% 16V	
C2075	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
		<COMPOSITION CIRCUIT BLOCK>			
CP2001	1-236-472-11	NETWORK, RES, THICK FILM			
		<TRIMMER>			
CV2001	1-141-245-00	CAP, TRIMMER			
		<DIODE>			
D2003	8-719-106-16	DIODE RD6.8M-B1			
D2004	8-719-404-46	DIODE MA110			
D2005	8-719-404-46	DIODE MA110			
D2006	8-719-105-45	DIODE RD3.3M-B1			
D2007	8-719-911-19	DIODE 1SS119			
		<FILTER>			
FL2001	1-235-941-11	YC MODULE			
		<IC>			
IC2001	8-759-231-58	IC TA7812S			
IC2002	8-759-700-48	IC NJM2903S			
IC2003	8-759-805-37	IC L78LR05D-MA			
IC2004	8-759-066-51	IC MB88733-143			
IC2005	8-759-803-25	IC CXK1006L			
IC2006	8-752-006-12	IC CX20061			
IC2007	8-752-033-32	IC CXA1228S			
		<CONNECTOR>			
J2001	*1-573-962-11	CONNECTOR (MALE) 50P			
		<COIL>			
L2002	1-410-663-31	INDUCTOR	10UH		
L2003	1-410-667-31	INDUCTOR	22UH		
L2004	1-410-663-31	INDUCTOR	10UH		
L2009	1-410-663-31	INDUCTOR	10UH		
L2010	1-410-677-31	INDUCTOR	180UH		
L2011	1-410-677-31	INDUCTOR	180UH		
		<CONNECTOR>			
P3-39	*1-564-521-11	PLUG, CONNECTOR 6P			
P3-40	*1-564-519-11	PLUG, CONNECTOR 4P			
P3-41	*1-564-519-11	PLUG, CONNECTOR 4P			
		<TRANSISTOR>			
Q2001	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2002	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2003	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2004	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2005	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2006	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2007	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2008	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R			
Q2009	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2010	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2011	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2012	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2015	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2016	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2017	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2018	8-729-420-81	TRANSISTOR 2SD874A-R			
Q2019	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2020	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2021	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2022	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2023	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2024	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2025	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2026	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2027	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2028	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2029	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2030	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2031	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2032	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2033	8-729-600-12	TRANSISTOR 2SK108-C			
Q2034	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2035	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q2036	8-729-422-27	TRANSISTOR 2SD601A-Q			
		<RESISTOR>			
R2002	⚠1-216-357-91	METAL OXIDE	4.7	5% 1W	F
R2003	1-216-061-00	METAL GLAZE	3.3K	5% 1/10W	
R2004	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R2006	1-216-689-11	METAL GLAZE	39K	5% 1/10W	
R2007	1-216-063-00	METAL GLAZE	3.9K	5% 1/10W	
R2008	1-216-081-00	METAL GLAZE	22K	5% 1/10W	
R2009	1-216-081-00	METAL GLAZE	22K	5% 1/10W	
R2010	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R2011	1-216-079-00	METAL GLAZE	18K	5% 1/10W	
R2012	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R2013	1-216-079-00	METAL GLAZE	18K	5% 1/10W	
R2014	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R2015	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R2016	1-216-295-00	METAL GLAZE	0	5% 1/10W	
R2017	1-216-047-00	METAL GLAZE	820	5% 1/10W	
R2018	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R2019	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R2020	1-216-037-00	METAL GLAZE	330	5% 1/10W	
R2021	1-216-095-00	METAL GLAZE	82K	5% 1/10W	
R2022	1-216-109-00	METAL GLAZE	330K	5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R2023	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2024	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R2025	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2026	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2027	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2028	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2029	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2030	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R2031	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2032	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2033	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2034	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2035	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2036	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2037	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2038	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2039	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2040	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2041	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2042	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R2043	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2044	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2045	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2046	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2047	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2048	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2049	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2050	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R2051	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2052	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2053	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2054	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2055	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2056	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2057	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2058	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2059	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2060	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2061	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2062	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2063	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2064	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2074	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2075	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2076	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2077	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R2078	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2079	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R2080	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2081	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2082	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2083	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2084	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R2085	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R2086	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R2087	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R2088	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R2089	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2090	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2091	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2093	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2094	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R2095	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R2096	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R2097	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2100	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2101	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R2102	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2104	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2105	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2106	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2107	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2108	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2109	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2110	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2111	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2112	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2113	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2114	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R2115	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2116	1-216-119-00	METAL GLAZE	820K	5%	1/10W	
R2117	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2118	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R2119	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R2122	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2124	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2125	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R2127	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R2128	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R2129	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2130	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R2131	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R2132	1-216-676-11	METAL CHIP	11K	0.50%	1/10W	
R2133	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2134	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2135	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2136	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2137	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2138	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2139	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2140	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2141	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2142	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2143	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2144	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2145	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2146	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2147	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2148	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2149	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2152	1-216-295-00	METAL GLAZE	0	5%	1/10W	

<VARIABLE RESISTOR>

RV2001	1-238-015-11	RES, ADJ, CARBON 4.7K
RV2002	1-238-019-11	RES, ADJ, CARBON 47K
RV2003	1-238-017-11	RES, ADJ, CARBON 22K
RV2004	1-238-017-11	RES, ADJ, CARBON 22K

<TUNER>

TU2001 ⚠	1-693-102-22	TUNER (BTF-XA401)

<CRYSTAL>

X2001	1-567-192-11	OSCILLATOR, CERAMIC
X2002	1-567-505-11	OSCILLATOR, CRYSTAL

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A

REF.NO.	PART NO.	DESCRIPTION	REMARK
**********			
	*A-1297-104-A	A BOARD, COMPLETE (KP-53XBR25(U/C)) **********	
	*A-1297-105-A	A BOARD, COMPLETE (KP-46XBR25/61XBR28) **********	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
		<CONNECTOR>	
A-1	*1-564-514-11	PLUG, CONNECTOR 11P	
A-2	*1-564-512-11	PLUG, CONNECTOR 9P	
A-3	*1-564-507-11	PLUG, CONNECTOR 4P	
A-4	*1-564-508-11	PLUG, CONNECTOR 5P	
A-5	*1-564-511-51	PLUG, CONNECTOR 8P	
A-6	*1-564-507-11	PLUG, CONNECTOR 4P	
A-7	*1-564-505-11	PLUG, CONNECTOR 2P	
A-9	*1-564-505-11	PLUG, CONNECTOR 2P	
A-10	*1-564-511-71	PLUG, CONNECTOR 8P	
A-11	*1-564-511-81	PLUG, CONNECTOR 8P	
A-12	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P	
A-13	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P	
A-14	*1-564-513-11	PLUG, CONNECTOR 10P	
A-15	*1-564-508-11	PLUG, CONNECTOR 5P	
A-16	*1-564-508-11	PLUG, CONNECTOR 5P	
A-17	*1-564-508-11	PLUG, CONNECTOR 5P	
A-18	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
A-19	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
A-20	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
A-21	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
A-22	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P	
A-25	*1-564-506-11	PLUG, CONNECTOR 3P	
A-27	*1-573-979-11	CONNECTOR, BOARD TO BOARD 11P	
A-28	*1-564-508-11	PLUG, CONNECTOR 5P	
A-31	*1-573-960-11	CONNECTOR (FEMALE) 50P	
A-38	*1-564-505-11	PLUG, CONNECTOR 2P	
A-56	*1-564-508-11	PLUG, CONNECTOR 5P	
		<CAPACITOR>	
C201	1-124-910-11	ELECT 47MF 20% 50V	
C202	1-124-903-11	ELECT 1MF 20% 50V	
C203	1-130-495-00	MYLAR 0.1MF 5% 50V	
C204	1-124-477-11	ELECT 47MF 20% 16V	
C205	1-124-557-11	ELECT 1000MF 20% 25V	
C206	1-126-101-11	ELECT 100MF 20% 16V	
C207	1-124-242-00	ELECT 33MF 20% 16V	
C210	1-102-121-00	CERAMIC 0.0022MF 10% 50V	
C212	1-126-803-11	ELECT 47MF 20% 16V	
C213	1-126-103-11	ELECT 470MF 20% 16V	
C214	1-126-101-11	ELECT 100MF 20% 16V	
C215	1-126-803-11	ELECT 47MF 20% 50V	
C216	1-126-101-11	ELECT 100MF 20% 16V	
C217	1-126-803-11	ELECT 47MF 20% 25V	
C218	1-126-103-11	ELECT 470MF 20% 16V	
C219	1-124-443-00	ELECT 100MF 20% 10V	
C220	1-126-803-11	ELECT 47MF 20% 25V	
C223	1-126-803-11	ELECT 47MF 20% 25V	
C224	1-124-261-00	ELECT 10MF 20% 50V	
C225	1-124-120-11	ELECT 220MF 20% 16V	
C226	1-124-120-11	ELECT 220MF 20% 16V	
C227	1-124-621-11	ELECT 3300MF 20% 6.3V	
C299	1-126-101-11	ELECT 100MF 20% 16V	
C502	1-126-182-11	ELECT 0.47MF 20% 50V	
C503	1-130-487-00	MYLAR 0.022MF 5% 50V	
C504	1-136-153-00	FILM 0.01MF 5% 50V	
C507	1-106-383-00	MYLAR 0.047MF 200V	
C508	1-102-973-00	CERAMIC 100PF 5% 50V	
C509	1-102-030-00	CERAMIC 330PF 10% 500V	
C510 ⚠	1-136-565-11	FILM 0.015MF 3% 1.4KV	
C512 ⚠	1-136-598-11	FILM 3MF 5% 200V	
C513	1-136-153-00	FILM 0.01MF 5% 50V	
C514	1-124-477-11	ELECT 47MF 20% 16V	
C522	1-123-024-21	ELECT 33MF 160V	
C523	1-106-383-00	MYLAR 0.047MF 200V	
C528	1-124-662-11	ELECT 220MF 20% 50V	
C534	1-124-011-00	ELECT 220MF 20% 16V	
C535	1-124-011-00	ELECT 220MF 20% 16V	
C536	1-124-662-11	ELECT 220MF 20% 50V	
C537	1-124-662-11	ELECT 220MF 20% 50V	
C539	1-124-907-11	ELECT 10MF 20% 50V	
C542	1-136-153-00	FILM 0.01MF 5% 50V	
C543	1-136-153-00	FILM 0.01MF 5% 50V	
C544	1-136-153-00	FILM 0.01MF 5% 50V	
C545	1-136-153-00	FILM 0.01MF 5% 50V	
C569	1-126-355-11	ELECT 33MF 20% 160V	
C1401	1-124-910-11	ELECT 47MF 20% 50V	
C1402	1-126-157-11	ELECT 10MF 20% 16V	
C1405	1-124-910-11	ELECT 47MF 20% 50V	
C1406	1-126-101-11	ELECT 100MF 20% 16V	
C1407	1-126-057-11	ELECT 2200MF 20% 50V	
C1408	1-136-165-00	FILM 0.1MF 5% 50V	
C1409	1-136-165-00	FILM 0.1MF 5% 50V	
C1413	1-124-234-00	ELECT 22MF 20% 16V	
C1424	1-126-057-11	ELECT 2200MF 20% 50V	
C1425	1-126-057-11	ELECT 2200MF 20% 50V	
C1426	1-126-157-11	ELECT 10MF 20% 16V	
C1429	1-126-101-11	ELECT 100MF 20% 16V	
C1430	1-126-101-11	ELECT 100MF 20% 16V	
C1431	1-124-916-11	ELECT 22MF 20% 50V	
C1435	1-124-916-11	ELECT 22MF 20% 25V	
C1440	1-126-336-11	ELECT 220MF 20% 25V	
C1601	1-130-483-00	MYLAR 0.01MF 5% 50V	
C1603	1-136-153-00	FILM 0.01MF 5% 50V	
C1607	1-124-907-11	ELECT 10MF 20% 50V	
C1608	1-136-153-00	FILM 0.01MF 5% 50V	
C1609	1-136-153-00	FILM 0.01MF 5% 50V	
C1610	1-124-916-11	ELECT 22MF 20% 50V	
		<DIODE>	
D201	8-719-110-13	DIODE RD9.1ESB2	
D202	8-719-110-13	DIODE RD9.1ESB2	
D203	8-719-911-19	DIODE 1SS119	
D204	8-719-911-19	DIODE 1SS119	
D205	8-719-110-36	DIODE RD13ESB2	
D206	8-719-911-19	DIODE 1SS119	
D207	8-719-911-19	DIODE 1SS119	
D208	8-719-911-19	DIODE 1SS119	
D209	8-719-911-19	DIODE 1SS119	
D211	8-719-110-36	DIODE RD13ESB2	
D213	8-719-110-78	DIODE RD33ESB2	
D214	8-719-911-19	DIODE 1SS119	
D215	8-719-911-19	DIODE 1SS119	
D216	8-719-911-19	DIODE 1SS119	
D217	8-719-911-19	DIODE 1SS119	
D219	8-719-911-19	DIODE 1SS119	
D220	8-719-510-48	DIODE D1N20R	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D221	8-719-911-19	DIODE 1SS119	
D222	8-719-911-19	DIODE 1SS119	
D223	8-719-911-19	DIODE 1SS119	
D501	8-719-971-20	DIODE ERC38-06	
D502	8-719-971-20	DIODE ERC38-06	
D503	8-719-300-80	DIODE RU-1C	
D504	8-719-109-88	DIODE RD5.6ESB1	
D505	8-719-900-63	DIODE V09G	(KP-46XBR25/61XBR28)
D506	8-719-900-63	DIODE V09G	(KP-46XBR25/61XBR28)
D507	8-719-970-89	DIODE DD50R	
D509	8-719-911-19	DIODE 1SS119	
D510	8-719-109-71	DIODE RD3.9ESB1	
D511	8-719-911-19	DIODE 1SS119	
D512	8-719-911-19	DIODE 1SS119	
D513	8-719-911-19	DIODE 1SS119	
D514	8-719-911-19	DIODE 1SS119	
D515	8-719-911-19	DIODE 1SS119	
D1401	8-719-911-19	DIODE 1SS119	
D1402	8-719-911-19	DIODE 1SS119	
D1403	8-719-911-19	DIODE 1SS119	
D1404	8-719-110-88	DIODE RD39ESB2	
D1405	8-719-110-88	DIODE RD39ESB2	
D1406	8-719-911-19	DIODE 1SS119	
D1407	8-719-110-88	DIODE RD39ESB2	
D1408	8-719-911-19	DIODE 1SS119	
D1409	8-719-110-88	DIODE RD39ESB2	
D1410	8-719-911-19	DIODE 1SS119	
D1607	8-719-911-19	DIODE 1SS119	
D1608	8-719-911-19	DIODE 1SS119	

<IC>

IC201	8-749-920-58	IC SI-3090CA	
IC204	8-759-171-05	IC UPC7805H	
IC205	8-759-144-82	IC UPC2405HF	
IC206	8-759-231-58	IC TA7812S	
IC207	8-749-920-58	IC SI-3090CA	
IC506	8-752-057-18	IC CXA1315P	
IC1401	8-759-246-70	IC TA8216H	
IC1601	8-752-058-71	IC CXA1656S	

<JACK>

J202	1-507-562-00	JACK	
J203	1-507-562-00	JACK	

<JUMPER DIODE>

JW266	8-719-911-19	DIODE 1SS119	

<COIL>

L201	1-408-429-00	INDUCTOR	470UH
L205	1-410-645-31	INDUCTOR	100UH
L206	1-408-416-00	INDUCTOR	39UH
L212	1-410-312-11	INDUCTOR	0.22UH
L501 ⚠	1-460-196-11	COIL, HORIZONTAL LINEARITY	
L502	1-459-313-00	COIL WITH CORE (HWC)	
L515	1-410-645-31	INDUCTOR	100UH

<TRANSISTOR>

Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q203	8-729-119-76	TRANSISTOR 2S1175-HFE	
Q501	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q502	8-729-014-88	TRANSISTOR 2SC4891-CA	
Q504	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q505	8-729-201-32	TRANSISTOR 2SA1013-O	
Q506	8-729-201-32	TRANSISTOR 2SA1013-O	
Q507	8-729-304-92	TRANSISTOR 2SB649A-C	
Q508	8-729-204-16	TRANSISTOR 2SA1301-O	
Q509	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q510	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q511	8-729-119-76	TRANSISTOR 2S1175-HFE	
Q512	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1401	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1402	8-729-900-63	TRANSISTOR DTA124ES	
Q1407	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1408	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1601	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1602	8-729-119-76	TRANSISTOR 2S1175-HFE	
Q1603	8-729-119-76	TRANSISTOR 2S1175-HFE	
Q1604	8-729-119-76	TRANSISTOR 2S1175-HFE	
Q1605	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1606	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1620	8-729-119-76	TRANSISTOR 2S1175-HFE	

<RESISTOR>

R201	1-249-405-11	CARBON	100	5%	1/4W	F
R202	1-249-405-11	CARBON	100	5%	1/4W	F
R203	1-249-425-11	CARBON	4.7K	5%	1/4W	
R204	1-249-441-11	CARBON	100K	5%	1/4W	
R214	1-249-429-11	CARBON	10K	5%	1/4W	
R215	1-249-437-11	CARBON	47K	5%	1/4W	
R216	1-249-377-11	CARBON	0.47	5%	1/4W	F
R219	1-249-426-11	CARBON	5.6K	5%	1/4W	
R221	1-249-409-11	CARBON	220	5%	1/4W	
R222	1-249-436-11	CARBON	39K	5%	1/4W	
R223	1-249-434-11	CARBON	27K	5%	1/4W	
R224	1-249-409-11	CARBON	220	5%	1/4W	
R225	1-249-417-11	CARBON	1K	5%	1/4W	
R229	⚠1-215-921-71	METAL OXIDE	4.7K	5%	3W	F
R230	⚠1-215-921-71	METAL OXIDE	4.7K	5%	3W	F
R231	1-249-409-11	CARBON	220	5%	1/4W	F
R232	⚠1-216-469-71	METAL OXIDE	12	5%	3W	F
R233	1-249-409-11	CARBON	220	5%	1/4W	
R234	1-249-409-11	CARBON	220	5%	1/4W	
R235	1-249-409-11	CARBON	220	5%	1/4W	
R236	1-249-409-11	CARBON	220	5%	1/4W	
R237	1-249-409-11	CARBON	220	5%	1/4W	
R238	1-249-409-11	CARBON	220	5%	1/4W	
R239	1-249-409-11	CARBON	220	5%	1/4W	
R240	⚠1-216-469-71	METAL OXIDE	12	5%	3W	F
R241	1-249-401-11	CARBON	47	5%	1/4W	
R242	⚠1-216-469-71	METAL OXIDE	12	5%	3W	F
R243	⚠1-217-288-11	WIREWOUND	1.5	10%	5W	F
R244	⚠1-217-296-11	WIREWOUND	6.8	10%	5W	F
R296	1-249-417-11	CARBON	1K	5%	1/4W	
R501	1-247-895-00	CARBON	470K	5%	1/4W	
R502	1-249-377-11	CARBON	0.47	5%	1/4W	F
R503	1-249-377-11	CARBON	0.47	5%	1/4W	F
R504	1-249-417-11	CARBON	1K	5%	1/4W	
R505	1-249-423-11	CARBON	3.3K	5%	1/4W	
R506	⚠1-215-922-91	METAL OXIDE	6.8K	5%	3W	F
R507	1-249-429-11	CARBON	10K	5%	1/4W	F
R508	⚠1-216-373-91	METAL OXIDE	2.2	5%	2W	F

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R509	⚠1-216-478-91	METAL OXIDE	390	5%	3W	F
R511	1-249-407-11	CARBON	150	5%	1/4W	
R512	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R513	1-249-417-11	CARBON	1K	5%	1/4W	
R514	⚠1-216-441-91	METAL OXIDE	27K	5%	1W	F
R515	1-249-432-11	CARBON	18K	5%	1/4W	F
R516	1-249-417-11	CARBON	1K	5%	1/4W	
R517	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R518	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R519	1-249-417-11	CARBON	1K	5%	1/4W	F
R520	⚠1-215-925-91	METAL OXIDE	22K	5%	3W	F
R521	⚠1-215-925-91	METAL OXIDE	22K	5%	3W	F
R522	1-249-421-11	CARBON	2.2K	5%	1/4W	
R523	1-249-434-11	CARBON	27K	5%	1/4W	
R524	1-249-434-11	CARBON	27K	5%	1/4W	
R525	⚠1-215-922-91	METAL OXIDE	6.8K	5%	3W	F
R526	1-249-417-11	CARBON	1K	5%	1/4W	
R528	⚠1-216-447-91	METAL OXIDE	27	5%	2W	F
R529	⚠1-216-447-91	METAL OXIDE	27	5%	2W	F
R530	1-249-431-11	CARBON	15K	5%	1/4W	
R531	1-249-431-11	CARBON	15K	5%	1/4W	
R532	1-249-385-11	CARBON	2.2	5%	1/4W	F
R533	1-249-405-11	CARBON	100	5%	1/4W	
R534	1-249-405-11	CARBON	100	5%	1/4W	
R535	1-249-405-11	CARBON	100	5%	1/4W	
R536	⚠1-217-316-11	WIREWOUND	330	10%	5W	F
R537	⚠1-217-316-11	WIREWOUND	330	10%	5W	F
R550	1-249-385-11	CARBON	2.2	5%	1/4W	F
R558	1-249-385-11	CARBON	2.2	5%	1/4W	F
R559	1-249-409-11	CARBON	220	5%	1/4W	
R560	1-249-409-11	CARBON	220	5%	1/4W	
R563	1-249-429-11	CARBON	10K	5%	1/4W	
R564	1-249-429-11	CARBON	10K	5%	1/4W	
R565	1-249-427-11	CARBON	6.8K	5%	1/4W	
R566	1-249-427-11	CARBON	6.8K	5%	1/4W	
R567	1-249-427-11	CARBON	6.8K	5%	1/4W	
R568	1-249-427-11	CARBON	6.8K	5%	1/4W	
R569	1-249-426-11	CARBON	5.6K	5%	1/4W	
R570	1-249-441-11	CARBON	100K	5%	1/4W	
R571	1-249-429-11	CARBON	10K	5%	1/4W	
R572	1-249-429-11	CARBON	10K	5%	1/4W	
R574	1-249-417-11	CARBON	1K	5%	1/4W	
R579	1-249-417-11	CARBON	1K	5%	1/4W	
R1401	1-215-445-00	METAL	10K	1%	1/4W	
R1402	1-215-445-00	METAL	10K	1%	1/4W	
R1403	1-215-445-00	METAL	10K	1%	1/4W	
R1404	1-215-445-00	METAL	10K	1%	1/4W	
R1405	1-249-385-11	CARBON	2.2	5%	1/4W	
R1406	1-249-385-11	CARBON	2.2	5%	1/4W	
R1409	1-249-433-11	CARBON	22K	5%	1/4W	
R1410	1-249-433-11	CARBON	22K	5%	1/4W	
R1411	1-249-437-11	CARBON	47K	5%	1/4W	
R1427	⚠1-215-865-91	METAL OXIDE	220	5%	1W	F
R1428	⚠1-215-865-91	METAL OXIDE	220	5%	1W	F
R1431	1-249-405-11	CARBON	100	5%	1/4W	
R1433	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1434	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1439	1-247-883-00	CARBON	150K	5%	1/4W	
R1440	1-249-417-11	CARBON	1K	5%	1/4W	
R1442	1-249-398-11	CARBON	27	5%	1/4W	
R1443	1-249-398-11	CARBON	27	5%	1/4W	
R1520	1-249-429-11	CARBON	10K	5%	1/4W	
R1601	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1602	1-249-417-11	CARBON	1K	5%	1/4W	
R1603	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1604	1-249-405-11	CARBON	100	5%	1/4W	
R1605	1-249-405-11	CARBON	100	5%	1/4W	
R1606	1-249-405-11	CARBON	100	5%	1/4W	
R1607	1-249-415-11	CARBON	680	5%	1/4W	
R1608	1-249-415-11	CARBON	680	5%	1/4W	
R1609	1-249-415-11	CARBON	680	5%	1/4W	
R1610	1-249-405-11	CARBON	100	5%	1/4W	
R1611	1-249-405-11	CARBON	100	5%	1/4W	
R1612	1-249-405-11	CARBON	100	5%	1/4W	
R1613	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1614	1-249-411-11	CARBON	330	5%	1/4W	
R1622	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1624	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1627	1-249-429-11	CARBON	10K	5%	1/4W	
R1630	1-249-434-11	CARBON	27K	5%	1/4W	
R1631	1-249-433-11	CARBON	22K	5%	1/4W	
R1656	1-249-397-11	CARBON	22	5%	1/4W	
R1657	1-249-397-11	CARBON	22	5%	1/4W	
R1658	1-249-397-11	CARBON	22	5%	1/4W	

<TRANSFORMER>

T501	⚠1-439-545-11	TRANSFORMER, FERRITE
T502	⚠1-437-078-11	TRANSFORMER, HORIZONTAL DRIVE

<TUNER>

TU101	⚠1-693-102-22	TUNER (BTF-XA401)

****

*A-1306-435-A M BOARD, COMPLETE
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<CAPACITOR>

C001	1-124-261-00	ELECT	10MF	20%	50V
C002	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C003	1-136-161-00	FILM	0.047MF	5%	50V
C004	1-126-301-11	ELECT	1MF	20%	50V
C005	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C014	1-124-910-11	ELECT	47MF	20%	50V
C015	1-124-464-11	ELECT	0.22MF	20%	50V
C017	1-124-589-11	ELECT	47MF	20%	16V
C018	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C019	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C020	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C021	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C029	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C030	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C034	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C035	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C036	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C041	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C042	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C045	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C047	1-124-261-00	ELECT	10MF	20%	50V
C048	1-124-261-00	ELECT	10MF	20%	50V
C049	1-124-261-00	ELECT	10MF	20%	50V
C055	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C064	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C065	1-124-257-00	ELECT	2.2MF	20%	50V

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>	
D001	8-719-404-46	DIODE MA110	
D002	8-719-404-46	DIODE MA110	
D003	8-719-404-46	DIODE MA110	
D004	8-719-404-46	DIODE MA110	
D005	8-719-404-46	DIODE MA110	
D006	8-719-404-46	DIODE MA110	
D007	8-719-404-46	DIODE MA110	
D008	8-719-404-46	DIODE MA110	
D009	8-719-404-46	DIODE MA110	
D010	8-713-300-57	DIODE 1T33	
D011	8-719-404-46	DIODE MA110	
D012	8-719-404-46	DIODE MA110	
D014	8-719-404-46	DIODE MA110	
D015	8-719-404-46	DIODE MA110	
		<IC>	
IC001	8-759-169-06	IC TMC73C247-10	
IC002	8-759-403-44	IC MN1280-S	
		<COIL>	
L001	1-408-409-00	INDUCTOR 10UH	
L002	1-410-476-11	INDUCTOR 33UH	
		<CONNECTOR>	
M-39	*1-564-521-11	PLUG, CONNECTOR 6P	
M-45	*1-564-523-11	PLUG, CONNECTOR 8P	
M-001	1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P	
		<TRANSISTOR>	
Q001	8-729-216-22	TRANSISTOR 2SA1162-G	
Q002	8-729-216-22	TRANSISTOR 2SA1162-G	
Q003	8-729-216-22	TRANSISTOR 2SA1162-G	
Q004	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q005	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q006	8-729-216-22	TRANSISTOR 2SA1162-G	
Q007	8-729-216-22	TRANSISTOR 2SA1162-G	
Q008	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q009	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q010	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q011	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q012	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q013	8-729-216-22	TRANSISTOR 2SA1162-G	
Q014	8-729-422-27	TRANSISTOR 2SD601A-Q	
		<RESISTOR>	
R001	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R002	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R003	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R004	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R005	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R006	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R007	1-216-027-00	METAL GLAZE 120 5% 1/10W	
R008	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R009	1-216-027-00	METAL GLAZE 120 5% 1/10W	
R011	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R012	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R013	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R014	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R015	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R016	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R017	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R018	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R019	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R020	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R021	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R022	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R023	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R024	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R025	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R026	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R027	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R028	1-216-023-00	METAL GLAZE 82 5% 1/10W	
R029	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R030	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R031	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R032	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R033	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R034	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R035	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R036	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R037	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R038	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R039	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R040	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R041	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R042	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R043	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R044	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R045	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R046	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R047	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R048	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R049	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R050	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R051	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R052	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R053	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R054	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R055	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R056	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R057	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R058	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R059	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R060	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R063	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R064	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R065	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R066	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R067	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R068	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R069	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R070	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R071	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R072	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R073	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R074	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R075	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R076	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R077	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R078	1-216-033-00	METAL GLAZE 220 5% 1/10W	

M **E1**

REF.NO.	PART NO.	DESCRIPTION				REMARK
R079	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R080	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R081	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R082	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R083	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R084	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R085	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R086	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R087	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R088	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R089	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R090	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R091	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R092	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R093	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R094	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R095	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R096	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R097	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R098	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R099	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R100	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R101	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R102	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R103	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R104	1-216-033-00	METAL GLAZE	220	5%	1/10W	

<CRYSTAL>

X001	1-579-743-11	VIBRATOR, CRYSTAL	

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*A-1346-138-A E1 BOARD, COMPLETE
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<CAPACITOR>

C301	1-163-010-11	CERAMIC CHIP	0.0012MF	10%	50V
C303	1-126-157-11	ELECT	10MF	20%	16V
C304	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C305	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C306	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C309	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C310	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C314	1-124-915-11	ELECT	10MF	20%	16V
C315	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C319	1-126-157-11	ELECT	10MF	20%	16V
C320	1-124-465-00	ELECT	0.47MF	20%	50V
C321	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C322	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C323	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C324	1-124-234-00	ELECT	22MF	20%	16V
C325	1-104-563-11	FILM CHIP	0.1MF	5%	16V
C326	1-104-563-11	FILM CHIP	0.1MF	5%	16V
C327	1-104-563-11	FILM CHIP	0.1MF	5%	16V
C328	1-126-157-11	ELECT	10MF	20%	16V
C329	1-126-157-11	ELECT	10MF	20%	16V
C330	1-126-157-11	ELECT	10MF	20%	16V
C331	1-126-301-11	ELECT	1MF	20%	50V
C332	1-124-584-00	ELECT	100MF	20%	10V
C333	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C334	1-137-491-11	FILM CHIP	0.1MF	5%	25V
C335	1-136-169-00	FILM	0.22MF	5%	50V
C336	1-126-301-11	ELECT	1MF	20%	50V
C337	1-126-301-11	ELECT	1MF	20%	50V
C338	1-124-584-00	ELECT	100MF	20%	10V
C339	1-124-791-11	ELECT	1MF	20%	50V
C340	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C341	1-126-157-11	ELECT	10MF	20%	16V
C342	1-124-465-00	ELECT	0.47MF	20%	50V
C343	1-124-589-11	ELECT	47MF	20%	16V
C344	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C345	1-124-767-00	ELECT	2.2MF	20%	50V
C346	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C347	1-136-169-00	FILM	0.22MF	5%	50V
C348	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C349	1-126-301-11	ELECT	1MF	20%	50V
C350	1-126-301-11	ELECT	1MF	20%	50V
C351	1-163-002-11	CERAMIC CHIP	270PF	10%	50V
C352	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C353	1-126-163-11	ELECT	4.7MF	20%	50V
C354	1-136-169-00	FILM	0.22MF	5%	50V
C355	1-124-465-00	ELECT	0.47MF	20%	50V
C356	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C357	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C358	1-124-767-00	ELECT	2.2MF	20%	50V
C360	1-137-491-11	FILM CHIP	0.1MF	5%	25V
C361	1-126-301-11	ELECT	1MF	20%	50V
C362	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C363	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C364	1-126-301-11	ELECT	1MF	20%	50V
C365	1-164-343-11	CERAMIC CHIP	0.056MF	10%	25V
C366	1-124-257-00	ELECT	2.2MF	20%	50V
C367	1-126-157-11	ELECT	10MF	20%	16V
C368	1-124-234-00	ELECT	22MF	20%	16V
C369	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C370	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C371	1-124-126-00	ELECT	47MF	20%	16V
C372	1-124-589-11	ELECT	47MF	20%	16V
C373	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C378	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C379	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C380	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C381	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C382	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C383	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C384	1-163-095-00	CERAMIC CHIP	12PF	5%	50V

<DIODE>

D301	8-719-404-46	DIODE MA110
D302	8-719-404-46	DIODE MA110
D303	8-719-404-46	DIODE MA110
D304	8-719-404-46	DIODE MA110
D305	8-719-404-46	DIODE MA110
D306	8-719-158-15	DIODE RD5.6SB
D307	8-719-404-46	DIODE MA110
D310	8-719-158-15	DIODE RD5.6SB
D312	8-719-404-46	DIODE MA110
D313	8-719-404-46	DIODE MA110
D314	8-719-404-46	DIODE MA110
D315	8-719-404-46	DIODE MA110
D316	8-719-404-46	DIODE MA110
D317	8-719-404-46	DIODE MA110
D318	8-719-404-46	DIODE MA110
D319	8-719-404-46	DIODE MA110
D320	8-719-404-46	DIODE MA110

E1

REF.NO.	PART NO.	DESCRIPTION	REMARK
D321	8-719-400-94	DIODE MA3130	
		<CONNECTOR>	
E1-24	*1-564-523-11	PLUG, CONNECTOR 8P	
E1-25	*1-564-521-11	PLUG, CONNECTOR 6P	
E1-26	*1-564-522-11	PLUG, CONNECTOR 7P	
E1-001	1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P	
		<DELAY LINE>	
DL302	1-415-817-11	DELAY LINE	
		<IC>	
IC301	8-752-058-68	IC CXA1315M	
IC302	8-752-057-68	IC CXA1464AS	
IC303	8-759-106-02	IC UPC4570G2	
		<COIL>	
L301	1-410-064-11	INDUCTOR 2.7MMH	
L307	1-410-944-31	INDUCTOR CHIP 15UH	
L308	1-410-946-31	INDUCTOR CHIP 22UH	
		<TRANSISTOR>	
Q301	8-729-925-79	TRANSISTOR IMX3	
Q302	8-729-925-79	TRANSISTOR IMX3	
Q303	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q304	8-729-907-46	TRANSISTOR IMZ1	
Q305	8-729-925-79	TRANSISTOR IMX3	
Q306	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q307	8-729-903-10	TRANSISTOR FMW1	
Q309	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q310	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q311	8-729-403-27	TRANSISTOR XN4401	
Q312	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q314	8-729-403-27	TRANSISTOR XN4401	
Q315	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q316	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q317	8-729-216-22	TRANSISTOR 2SA1162-G	
Q321	8-729-925-79	TRANSISTOR IMX3	
Q322	8-729-216-22	TRANSISTOR 2SA1162-G	
Q323	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q324	8-729-216-22	TRANSISTOR 2SA1162-G	
Q325	8-729-216-22	TRANSISTOR 2SA1162-G	
Q326	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q327	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q328	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q329	8-729-925-79	TRANSISTOR IMX3	
Q330	8-729-925-79	TRANSISTOR IMX3	
Q333	8-729-925-79	TRANSISTOR IMX3	
Q334	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q335	8-729-907-46	TRANSISTOR IMZ1	
Q340	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q342	8-729-925-79	TRANSISTOR IMX3	
Q344	8-729-216-22	TRANSISTOR 2SA1162-G	
		<RESISTOR>	
R301	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R302	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R303	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R304	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R305	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R306	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R307	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R308	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R309	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R310	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R312	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R313	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R314	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R316	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R317	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R320	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R325	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R326	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R331	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R332	1-216-657-11	METAL CHIP 1.8K 0.50% 1/10W	
R333	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R336	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R338	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R339	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R340	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R341	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R343	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R344	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R345	1-216-292-11	METAL GLAZE 8.2M 5% 1/8W	
R346	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R347	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R348	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R349	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R350	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R351	1-216-674-11	METAL CHIP 9.1K 0.50% 1/10W	
R352	1-216-011-00	METAL GLAZE 27 5% 1/10W	
R353	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R354	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R355	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R356	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R357	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R358	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R359	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R360	1-216-119-00	METAL GLAZE 820K 5% 1/10W	
R361	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R362	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R363	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R364	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R365	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R366	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R367	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R368	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R369	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R370	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R371	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R372	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R373	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R374	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R375	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R376	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R377	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R378	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R379	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R380	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R381	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R382	1-216-033-00	METAL GLAZE 220 5% 1/10W	

E1 E2

REF.NO.	PART NO.	DESCRIPTION				REMARK
R383	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	
R384	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R385	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R386	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R387	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R388	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R389	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R390	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R391	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R393	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R394	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R395	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R396	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R397	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R398	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R399	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1301	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1302	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1303	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1304	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1305	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1306	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1307	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1308	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1309	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1310	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1311	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1312	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1313	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1314	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1315	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1316	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1317	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1318	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1319	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1320	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1321	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1322	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1323	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1324	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1325	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1326	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1327	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1328	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1329	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1330	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1331	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1332	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R1333	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W	
R1334	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1335	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1336	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1337	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1338	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1339	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1340	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1342	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1343	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R1344	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1345	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R1346	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1347	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1348	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1349	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1350	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1351	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1352	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R1353	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1354	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1355	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R1356	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1357	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1358	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1362	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R1363	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1364	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1373	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1374	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1379	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1380	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1381	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1382	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1383	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1384	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1385	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1386	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1387	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1388	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1389	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1390	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1391	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1392	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1394	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1395	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1396	1-216-125-00	METAL GLAZE	1.5M	5%	1/10W	
R1399	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R5301	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R5302	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R5303	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R5304	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R5305	1-216-085-00	METAL GLAZE	33K	5%	1/10W	

<CRYSTAL>

X301	1-567-505-11	OSCILLATOR, CRYSTAL	

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*A-1346-136-A B2 BOARD, COMPLETE
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<CAPACITOR>

C2302	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2303	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2310	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C2313	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C2314	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2315	1-126-157-11	ELECT	10MF	20%	16V
C2316	1-126-157-11	ELECT	10MF	20%	16V
C2317	1-126-157-11	ELECT	10MF	20%	16V
C2318	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2320	1-124-589-11	ELECT	47MF	20%	16V
C2321	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C2322	1-124-234-00	ELECT	22MF	20%	16V
C2323	1-124-234-00	ELECT	22MF	20%	16V
C2324	1-124-234-00	ELECT	22MF	20%	16V
C2325	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C2326	1-124-589-11	ELECT	47MF	20%	16V
C2327	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C2328	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2329	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2331	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2332	1-124-234-00	ELECT	22MF	20%	16V
C2333	1-124-234-00	ELECT	22MF	20%	16V
C2334	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2335	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2336	1-126-163-11	ELECT	4.7MF	20%	16V
C2337	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2338	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C2340	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2345	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C2346	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2347	1-163-367-11	CERAMIC CHIP	39PF	5%	50V
C2349	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C2350	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2351	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C2352	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C2353	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2354	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2357	1-126-301-11	ELECT	1MF	20%	50V
C2360	1-163-109-00	CERAMIC CHIP	47PF	5%	50V

<DIODE>

D2306	8-719-404-46	DIODE MA110	
D2307	8-719-946-98	DIODE FMN1	
D2308	8-719-946-98	DIODE FMN1	
D2309	8-719-404-46	DIODE MA110	
D2312	8-719-404-46	DIODE MA110	
D2313	8-719-404-46	DIODE MA110	
D2314	8-713-300-57	DIODE 1T33	
D2317	8-719-404-46	DIODE MA110	

<CONNECTOR>

E2-25	*1-564-521-11	PLUG, CONNECTOR 6P	
E2-26	*1-564-522-11	PLUG, CONNECTOR 7P	
E2-46	*1-564-518-11	PLUG, CONNECTOR 3P	
E2-002	1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P	

<IC>

IC2301	8-759-066-52	IC PCA8510T/012-T
IC2303	8-759-925-75	IC SN74HC05ANS
IC2304	8-752-037-15	IC CXA1387S
IC2306	8-759-011-65	IC MC74HC4053F
IC2307	8-752-058-68	IC CXA1315M

<COIL>

L2304	1-408-414-00	INDUCTOR	27UH

<TRANSISTOR>

Q2301	8-729-903-10	TRANSISTOR FMW1
Q2303	8-729-403-27	TRANSISTOR XN4401
Q2304	8-729-925-79	TRANSISTOR IMX3
Q2305	8-729-903-10	TRANSISTOR FMW1
Q2306	8-729-403-27	TRANSISTOR XN4401
Q2307	8-729-403-27	TRANSISTOR XN4401
Q2308	8-729-403-27	TRANSISTOR XN4401
Q2309	8-729-903-10	TRANSISTOR FMW1
Q2310	8-729-403-27	TRANSISTOR XN4401
Q2311	8-729-903-10	TRANSISTOR FMW1
Q2312	8-729-403-27	TRANSISTOR XN4401
Q2313	8-729-903-10	TRANSISTOR FMW1
Q2314	8-729-403-27	TRANSISTOR XN4401
Q2315	8-729-903-10	TRANSISTOR FMW1
Q2317	8-729-216-22	TRANSISTOR 2SA1162-G
Q2318	8-729-216-22	TRANSISTOR 2SA1162-G
Q2319	8-729-216-22	TRANSISTOR 2SA1162-G
Q2320	8-729-422-27	TRANSISTOR 2SD601A-Q
Q2321	8-729-422-27	TRANSISTOR 2SD601A-Q
Q2322	8-729-422-27	TRANSISTOR 2SD601A-Q
Q2324	8-729-216-22	TRANSISTOR 2SA1162-G
Q2326	8-729-422-27	TRANSISTOR 2SD601A-Q
Q2327	8-729-422-27	TRANSISTOR 2SD601A-Q
Q2330	8-729-903-10	TRANSISTOR FMW1
Q2337	8-729-925-79	TRANSISTOR IMX3
Q2338	8-729-422-27	TRANSISTOR 2SD601A-Q
Q2339	8-729-422-27	TRANSISTOR 2SD601A-Q
Q2340	8-729-422-27	TRANSISTOR 2SD601A-Q
Q2341	8-729-422-27	TRANSISTOR 2SD601A-Q
Q2342	8-729-422-27	TRANSISTOR 2SD601A-Q
Q2345	8-729-422-27	TRANSISTOR 2SD601A-Q

<RESISTOR>

R2302	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R2303	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R2304	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R2305	1-216-033-00	METAL GLAZE	220	5%	1/10W
R2306	1-216-045-00	METAL GLAZE	680	5%	1/10W
R2307	1-216-045-00	METAL GLAZE	680	5%	1/10W
R2308	1-216-045-00	METAL GLAZE	680	5%	1/10W
R2309	1-216-041-00	METAL GLAZE	470	5%	1/10W
R2310	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R2311	1-216-025-00	METAL GLAZE	100	5%	1/10W
R2312	1-216-043-00	METAL GLAZE	560	5%	1/10W
R2313	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R2314	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R2315	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R2317	1-216-041-00	METAL GLAZE	470	5%	1/10W
R2318	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R2319	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R2320	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R2321	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R2322	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R2323	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R2324	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R2325	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R2326	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R2327	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R2328	1-216-025-00	METAL GLAZE	100	5%	1/10W
R2329	1-216-025-00	METAL GLAZE	100	5%	1/10W
R2330	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R2331	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R2332	1-216-025-00	METAL GLAZE	100	5%	1/10W
R2333	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R2334	1-216-295-00	METAL GLAZE	0	5%	1/10W
R2335	1-216-295-00	METAL GLAZE	0	5%	1/10W
R2336	1-216-295-00	METAL GLAZE	0	5%	1/10W
R2337	1-216-033-00	METAL GLAZE	220	5%	1/10W
R2338	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R2340	1-216-049-00	METAL GLAZE	1K	5%	1/10W

E2 **Y2**

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2341	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2342	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2343	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2344	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2345	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R2346	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2347	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R2350	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2351	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2352	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2353	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2354	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W	
R2355	1-216-178-00	METAL GLAZE	150	5%	1/8W	
R2356	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R2357	1-216-670-11	METAL CHIP	6.2K	0.50%	1/10W	
R2359	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2360	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2361	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2362	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2363	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2364	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2365	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2366	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2367	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2368	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2371	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2374	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R2375	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2376	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2377	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2378	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2379	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2380	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2381	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2382	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2384	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2385	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R2386	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2387	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2388	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2390	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2393	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2394	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2395	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R2397	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2399	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3301	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3302	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3303	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R3304	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3306	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R3307	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R3308	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R3309	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3310	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3311	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R3312	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3313	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R3314	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R3315	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3316	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3318	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3319	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R3320	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R3321	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R3323	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3324	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3325	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3328	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3330	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3331	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3332	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R3339	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R3340	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3341	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R3342	1-216-670-11	METAL CHIP	6.2K	0.50%	1/10W	
R3343	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3344	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3349	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3350	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R3351	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R3353	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3354	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3361	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3362	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3364	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R3365	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R3367	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3368	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R3369	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3370	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3371	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3374	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3392	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R3401	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R7312	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R7313	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R7314	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	

<CRYSTAL>

X2301	1-577-071-11	VIBRATOR, CERAMIC			

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	*A-1394-442-A	Y2 BOARD, COMPLETE			
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<CAPACITOR>

C401	1-124-234-00	ELECT	22MF	20%	16V
C424	1-126-301-11	ELECT	1MF	20%	50V
C425	1-126-301-11	ELECT	1MF	20%	50V
C426	1-126-301-11	ELECT	1MF	20%	50V
C427	1-124-465-00	ELECT	0.47MF	20%	50V
C428	1-126-163-11	ELECT	4.7MF	20%	50V
C429	1-124-478-11	ELECT	100MF	20%	25V
C430	1-124-261-00	ELECT	10MF	20%	50V
C431	1-126-301-11	ELECT	1MF	20%	50V
C432	1-126-301-11	ELECT	1MF	20%	50V
C433	1-131-347-00	TANTALUM	1MF	20%	16V
C434	1-126-301-11	ELECT	1MF	20%	50V
C435	1-130-309-00	FILM	0.033MF	5%	100V
C436	1-126-301-11	ELECT	1MF	20%	50V
C437	1-130-487-00	MYLAR	0.022MF	5%	50V
C438	1-126-301-11	ELECT	1MF	20%	50V
C439	1-124-034-51	ELECT	33MF	20%	16V
C440	1-126-301-11	ELECT	1MF	20%	50V

REF.NO.	PART NO.	DESCRIPTION				REMARK
C441	1-126-301-11	ELECT	1MF	20%	50V	
C442	1-124-261-00	ELECT	10MF	20%	50V	
C443	1-124-589-11	ELECT	47MF	20%	16V	
C444	1-126-163-11	ELECT	4.7MF	20%	50V	
C445	1-126-163-11	ELECT	4.7MF	20%	50V	
C446	1-124-234-00	ELECT	22MF	20%	16V	
C447	1-126-301-11	ELECT	1MF	20%	50V	
C448	1-136-170-00	FILM	0.27MF	5%	50V	
C449	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C450	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C451	1-124-261-00	ELECT	10MF	20%	50V	
C452	1-124-261-00	ELECT	10MF	20%	50V	
C453	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C454	1-131-368-00	TANTALUM	3.3MF	10%	16V	
C455	1-131-347-00	TANTALUM	1MF	20%	16V	
C456	1-136-171-00	FILM	0.33MF	5%	50V	
C457	1-136-175-00	FILM	0.68MF	5%	50V	
C458	1-126-101-11	ELECT	100MF	20%	16V	
C459	1-126-101-11	ELECT	100MF	20%	16V	
C460	1-126-101-11	ELECT	100MF	20%	16V	
C461	1-124-499-11	ELECT	1MF	20%	50V	
C462	1-124-499-11	ELECT	1MF	20%	50V	
C465	1-130-485-00	MYLAR	0.015MF	5%	50V	
C466	1-130-485-00	MYLAR	0.015MF	5%	50V	
C467	1-136-169-00	FILM	0.22MF	5%	50V	
C468	1-136-169-00	FILM	0.22MF	5%	50V	
C469	1-126-157-11	ELECT	10MF	20%	16V	
C470	1-126-157-11	ELECT	10MF	20%	16V	
C471	1-124-589-11	ELECT	47MF	20%	16V	
C472	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C473	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C474	1-124-234-00	ELECT	22MF	20%	16V	
C475	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C476	1-124-234-00	ELECT	22MF	20%	16V	
C477	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C478	1-124-478-11	ELECT	100MF	20%	25V	
C479	1-126-163-11	ELECT	4.7MF	20%	50V	
C480	1-124-768-11	ELECT	4.7MF	20%	50V	
C481	1-124-768-11	ELECT	4.7MF	20%	50V	
C482	1-126-163-11	ELECT	4.7MF	20%	50V	
C483	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	
C484	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	
C485	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C487	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C488	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	

<DIODE>

D405	8-719-107-13	DIODE	RD18M-B1
D406	8-719-107-13	DIODE	RD18M-B1
D407	8-719-107-13	DIODE	RD18M-B1
D408	8-719-105-83	DIODE	RD5.1M-B3
D409	8-719-981-50	DIODE	RB100A
D410	8-719-981-50	DIODE	RB100A
D413	8-719-158-19	DIODE	RD6.2SB
D414	8-719-158-55	DIODE	RD15SB
D415	8-719-158-55	DIODE	RD15SB

<IC>

IC403	8-759-996-43	IC RC4558PS
IC404	8-759-067-24	IC 24C04AI/P
IC406	8-752-037-24	IC CXA1264AS
IC407	8-759-245-75	IC TA8184P
IC408	8-752-057-18	IC CXA1315P

REF.NO.	PART NO.	DESCRIPTION				REMARK

<TRANSISTOR>

Q404	8-729-216-22	TRANSISTOR 2SA1162-G
Q405	8-729-216-22	TRANSISTOR 2SA1162-G
Q409	8-729-422-27	TRANSISTOR 2SD601A-Q
Q410	8-729-422-27	TRANSISTOR 2SD601A-Q

<RESISTOR>

R447	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R453	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R464	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R465	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R466	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R467	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R468	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R469	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R470	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R471	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R472	1-216-686-11	METAL CHIP	30K	0.50%	1/10W	
R473	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R474	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R475	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R476	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R477	1-216-676-11	METAL CHIP	11K	0.50%	1/10W	
R478	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R479	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R480	1-216-676-11	METAL CHIP	11K	0.50%	1/10W	
R481	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R482	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R483	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R485	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R486	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R488	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R494	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R495	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R496	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R497	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R498	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R499	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R500	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R501	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W	
R502	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R503	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R504	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W	
R507	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R509	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R510	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R512	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R513	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R515	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R517	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R518	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R519	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R521	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R522	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R523	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R524	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R525	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R526	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R527	1-218-753-11	METAL CHIP	110K	0.50%	1/10W	
R528	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R529	1-216-097-00	METAL GLAZE	100K	5%	1/10W	

Y2 P2

REF.NO.	PART NO.	DESCRIPTION				REMARK
R531	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R532	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R533	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R535	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R536	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R537	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R538	1-218-753-11	METAL CHIP	110K	0.50%	1/10W	
R539	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R540	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R541	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R542	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R543	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R546	1-216-682-11	METAL CHIP	20K	0.50%	1/10W	
R547	1-216-682-11	METAL CHIP	20K	0.50%	1/10W	

<CONNECTOR>

Y2-401	1-573-966-11	PIN, CONNECTOR (PC BOARD) 36P	

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*A-1195-067-A	P2 BOARD, COMPLETE		

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<CAPACITOR>

C3001	1-163-111-00	CERAMIC CHIP	56PF	5%	50V	
C3002	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	
C3003	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	
C3004	1-124-034-51	ELECT	33MF	20%	16V	
C3005	1-124-034-51	ELECT	33MF	20%	16V	
C3006	1-126-177-11	ELECT	100MF	20%	6.3V	
C3007	1-126-177-11	ELECT	100MF	20%	6.3V	
C3008	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C3009	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C3010	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C3011	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C3012	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C3013	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C3014	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	
C3015	1-130-483-00	MYLAR	0.01MF	5%	50V	
C3016	1-126-177-11	ELECT	100MF	20%	6.3V	
C3017	1-126-301-11	ELECT	1MF	20%	50V	
C3018	1-130-477-00	MYLAR	0.0033MF	5%	50V	
C3019	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	
C3020	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C3021	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C3022	1-163-115-00	CERAMIC CHIP	82PF	5%	50V	
C3023	1-126-301-11	ELECT	1MF	20%	50V	
C3024	1-126-177-11	ELECT	100MF	20%	6.3V	
C3025	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3026	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C3027	1-124-034-51	ELECT	33MF	20%	16V	
C3028	1-163-085-00	CERAMIC CHIP	2PF	0.25PF	50V	
C3029	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	
C3030	1-124-034-51	ELECT	33MF	20%	16V	
C3031	1-126-096-11	ELECT	10MF	20%	25V	
C3032	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C3033	1-124-465-00	ELECT	0.47MF	20%	50V	
C3034	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3035	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3036	1-124-034-51	ELECT	33MF	20%	16V	
C3037	1-126-163-11	ELECT	4.7MF	20%	50V	
C3038	1-124-034-51	ELECT	33MF	20%	16V	
C3039	1-126-163-11	ELECT	4.7MF	20%	50V	
C3040	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3041	1-124-034-51	ELECT	33MF	20%	16V	
C3042	1-130-491-00	MYLAR	0.047MF	5%	50V	
C3043	1-124-465-00	ELECT	0.47MF	20%	50V	
C3044	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3045	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3046	1-126-177-11	ELECT	100MF	20%	6.3V	
C3047	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3049	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3050	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3051	1-124-034-51	ELECT	33MF	20%	16V	
C3052	1-126-101-11	ELECT	100MF	20%	16V	
C3054	1-124-261-00	ELECT	10MF	20%	50V	
C3057	1-124-478-11	ELECT	100MF	20%	25V	
C3058	1-124-478-11	ELECT	100MF	20%	25V	

<COMPOSITION CIRCUIT BLOCK>

CP3001	1-236-176-11	NETWORK, RES, THICK FILM
CP3002	1-236-176-11	NETWORK, RES, THICK FILM
CP3003	1-236-176-11	NETWORK, RES, THICK FILM

<DIODE>

D3002	8-713-300-57	DIODE 1T33
D3003	8-713-300-57	DIODE 1T33
D3004	8-719-404-46	DIODE MA110

<FILTER>

FL3001	1-236-129-11	ENCAPSULATED COMPONENT
FL3002	1-236-129-11	ENCAPSULATED COMPONENT
FL3003	1-236-129-11	ENCAPSULATED COMPONENT
FL3004	1-236-071-11	ENCAPSULATED COMPONENT
FL3005	1-236-071-11	ENCAPSULATED COMPONENT
FL3006	1-236-129-11	ENCAPSULATED COMPONENT
FL3007	1-236-164-11	ENCAPSULATED COMPONENT
FL3008	1-236-163-11	ENCAPSULATED COMPONENT
FL3009	1-236-164-11	ENCAPSULATED COMPONENT
FL3010	1-236-129-11	ENCAPSULATED COMPONENT
FL3011	1-236-163-11	ENCAPSULATED COMPONENT
FL3012	1-236-163-11	ENCAPSULATED COMPONENT
FL3013	1-236-163-11	ENCAPSULATED COMPONENT
FL3014	1-236-129-11	ENCAPSULATED COMPONENT

<IC>

IC3001	8-759-032-11	IC MC74HC04AF
IC3002	8-759-032-11	IC MC74HC04AF
IC3003	8-752-332-83	IC CXD1220AQ
IC3004	8-759-605-15	IC M5M4C500L-10
IC3005	8-759-605-14	IC M52678P
IC3006	8-759-605-15	IC M5M4C500L-10
IC3007	8-759-011-65	IC MC74HC4053F
IC3008	8-759-605-15	IC M5M4C500L-10
IC3009	8-759-605-14	IC M52678P
IC3010	8-759-112-06	IC UPC78N05H
IC3011	8-759-049-49	IC UPC7893AHF

<CONNECTOR>

J3001	*1-573-965-11	PIN, CONNECTOR (PC BOARD) 50P

P2 X3

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<COIL>				
L3001	1-410-470-11	INDUCTOR	10UH			
L3002	1-410-470-11	INDUCTOR	10UH			
L3003	1-410-470-11	INDUCTOR	10UH			
L3004	1-410-470-11	INDUCTOR	10UH			
L3005	1-408-421-00	INDUCTOR	100UH			
L3006	1-408-421-00	INDUCTOR	100UH			
L3007	1-408-424-00	INDUCTOR	180UH			
L3008	1-408-427-00	INDUCTOR	330UH			
		<CONNECTOR>				
P2-40	*1-564-519-11	PLUG, CONNECTOR 4P				
		<TRANSISTOR>				
Q3001	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3002	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3003	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3004	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3005	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3006	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3007	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3008	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3009	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3010	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3011	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3012	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3013	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3014	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3015	8-729-422-27	TRANSISTOR 2SD601A-Q				
		<RESISTOR>				
R3001	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3002	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R3003	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3005	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3006	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3007	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3008	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3009	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3010	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3011	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3012	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R3013	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R3014	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3015	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R3016	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R3017	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3018	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3019	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3020	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R3021	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3022	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3024	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3025	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3026	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3027	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R3028	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3029	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R3030	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R3031	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R3032	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3033	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R3034	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3035	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R3036	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3037	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R3038	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R3039	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R3040	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3041	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3042	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3043	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R3044	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3045	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3046	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R3047	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3048	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3049	1-216-662-11	METAL CHIP	3K	0.50%	1/10W	
R3050	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R3051	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R3052	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R3054	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3055	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R3056	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3057	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R3058	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3059	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R3060	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R3061	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R3062	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3063	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R3064	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3065	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3066	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3067	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R3068	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R3069	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R3070	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R3071	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R3072	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3073	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R3074	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3080	⚠1-216-358-91	METAL OXIDE	5.6	5%	1W	F
		<VARIABLE RESISTOR>				
RV3001	1-238-012-11	RES, ADJ, CARBON 1K				
RV3002	1-238-012-11	RES, ADJ, CARBON 1K				
		<COIL>				
T3001	1-404-607-11	COIL				
T3002	1-404-607-11	COIL				
**********						
	*A-1394-446-A	X3 BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C2501	1-124-477-11	ELECT	47MF	20%	16V	
C2502	1-124-477-11	ELECT	47MF	20%	16V	
C2505	1-124-638-11	ELECT	22MF	20%	6.3V	
C2506	1-126-177-11	ELECT	100MF	20%	10V	

X3

REF.NO.	PART NO.	DESCRIPTION			REMARK
C2507	1-126-163-11	ELECT	4.7MF	20%	16V
C2508	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C2509	1-126-163-11	ELECT	4.7MF	20%	50V
C2512	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2513	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C2514	1-126-163-11	ELECT	4.7MF	20%	16V
C2516	1-126-163-11	ELECT	4.7MF	20%	50V
C2517	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2518	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2519	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2520	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2521	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V
C2522	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2523	1-163-100-00	CERAMIC CHIP	20PF	5%	50V
C2524	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2525	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2526	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2527	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2528	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2529	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2532	1-126-163-11	ELECT	4.7MF	20%	16V
C2536	1-124-589-11	ELECT	47MF	20%	16V
C2537	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2540	1-126-163-11	ELECT	4.7MF	20%	16V
C2544	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2545	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2546	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2547	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2548	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2549	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2550	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2551	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2552	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2553	1-126-177-11	ELECT	100MF	20%	10V
C2554	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C2557	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2558	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2560	1-126-163-11	ELECT	4.7MF	20%	16V
C2561	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C2562	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V
C2563	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C2566	1-126-163-11	ELECT	4.7MF	20%	16V
C2569	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C2570	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V
C2571	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C2572	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C2573	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C2574	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V
C2575	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2577	1-124-465-00	ELECT	0.47MF	20%	50V
C2578	1-124-465-00	ELECT	0.47MF	20%	50V
C2579	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V
C2580	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C2581	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C2582	1-124-234-00	ELECT	22MF	20%	16V
C2583	1-124-589-11	ELECT	47MF	20%	16V
C2590	1-135-179-21	TANTAL. CHIP	2.2MF	20%	16V
C2591	1-135-179-21	TANTAL. CHIP	2.2MF	20%	16V
C2592	1-135-179-21	TANTAL. CHIP	2.2MF	20%	16V
C2593	1-135-179-21	TANTAL. CHIP	2.2MF	20%	16V

<DIODE>

D2501	8-719-404-46	DIODE MA110	

REF.NO.	PART NO.	DESCRIPTION	REMARK

<FERRITE BEAD>

FB2502	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB2504	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	

<FILTER>

FL2501	1-236-164-11	ENCAPSULATED COMPONENT	
FL2503	1-236-164-11	ENCAPSULATED COMPONENT	
FL2505	1-236-164-11	ENCAPSULATED COMPONENT	
FL2506	1-236-129-11	ENCAPSULATED COMPONENT	
FL2507	1-236-129-11	ENCAPSULATED COMPONENT	
FL2508	1-236-129-11	ENCAPSULATED COMPONENT	
FL2509	1-236-129-11	ENCAPSULATED COMPONENT	

<IC>

IC2501	8-759-052-52	IC L78M05T-FA	
IC2502	8-759-031-31	IC MC33174M	
IC2503	8-752-344-45	IC CXD2555Q	
IC2504	8-752-343-18	IC CXD2704Q	
IC2506	8-759-031-31	IC MC33174M	
IC2507	8-752-344-45	IC CXD2555Q	
IC2508	8-752-835-59	IC CXP5068H-081Q	
IC2509	8-759-042-02	IC S-80743AL-A7-S	
IC2510	8-752-332-80	IC CXD1160AQ	
IC2511	8-759-932-21	IC MB81256-12PSZ	
IC2512	8-759-069-14	IC M51132L	
IC2513	8-759-100-96	IC UPC4558G2	

<CONNECTOR>

J2501	*1-573-966-11	PIN, CONNECTOR (PC BOARD) 36P	
J2501	1-573-966-11	PIN, CONNECTOR (PC BOARD) 36P	

<COIL>

L2501	1-410-204-31	INDUCTOR CHIP 10UH	
L2504	1-410-204-31	INDUCTOR CHIP 10UH	
L2505	1-410-196-11	INDUCTOR CHIP 2.2UH	
L2510	1-410-204-31	INDUCTOR CHIP 10UH	
L2511	1-410-204-31	INDUCTOR CHIP 10UH	
L2512	1-410-204-31	INDUCTOR CHIP 10UH	
L2513	1-410-204-31	INDUCTOR CHIP 10UH	
L2514	1-410-204-31	INDUCTOR CHIP 10UH	
L2515	1-410-204-31	INDUCTOR CHIP 10UH	
L2516	1-410-204-31	INDUCTOR CHIP 10UH	
L2517	1-410-204-31	INDUCTOR CHIP 10UH	

<TRANSISTOR>

Q2501	8-729-422-27	TRANSISTOR 2SD601A-Q	

<RESISTOR>

R2501	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R2502	1-216-699-11	METAL CHIP	100K	0.50%	1/10W
R2505	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R2506	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R2507	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R2508	1-216-699-11	METAL CHIP	100K	0.50%	1/10W
R2509	1-216-097-00	METAL GLAZE	100K	5%	1/10W

X3 G

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2510	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2511	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R2512	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R2513	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2518	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2519	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2520	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2521	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2522	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2531	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2532	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2533	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R2534	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R2535	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R2536	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R2537	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R2538	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R2539	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2540	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2541	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2542	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2543	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R2544	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R2545	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R2546	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R2547	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R2548	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R2549	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2550	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2551	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2552	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2557	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2559	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2560	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2561	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2562	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2563	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2564	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2565	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R2566	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2567	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2568	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2569	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2570	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2571	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2572	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2573	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2574	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2575	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2576	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2577	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2578	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2579	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2583	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2584	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2585	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2590	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R2591	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R2592	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2593	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2594	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2595	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2596	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2597	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2598	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2599	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2600	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2601	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2602	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2603	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2605	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R2606	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R2607	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R2608	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R2609	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2610	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2611	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2612	1-216-025-00	METAL GLAZE	100	5%	1/10W	

<CRYSTAL>

X2501	1-579-692-31	VIBRATOR, CRYSTAL				

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	*A-1316-149-A	G BOARD, COMPLETE				
		**********				
	1-533-223-11	CLIP, FUSE				
	3-701-754-00	PLATE, INSULATING				
	4-382-854-11	SCREW (M3X10), P, SW (+)				

<CAPACITOR>

C601	1-161-830-00	CERAMIC	4700PF	10%	500V	
C602	1-130-317-00	FILM	0.068MF	5%	100V	
C603	1-124-634-11	ELECT	1MF	20%	250V	
C605	1-164-143-11	CERAMIC	0.001MF	10%	1KV	
C606	1-124-563-11	ELECT	2200MF	20%	25V	
C607	1-124-563-11	ELECT	2200MF	20%	25V	
C608	1-128-484-11	ELECT	100MF	20%	200V	
C609	1-137-141-11	FILM	0.082MF	3%	600V	
C612	1-124-962-11	ELECT	2200MF	20%	25V	
C614	1-126-326-51	ELECT	10MF	20%	200V	
C615	1-124-798-11	ELECT	1MF	20%	160V	
C616	1-124-557-11	ELECT	1000MF	20%	25V	
C617	1-164-143-11	CERAMIC	0.001MF	10%	1KV	
C618	1-136-853-11	FILM	0.56MF	5%	200V	
C619	1-164-735-11	CAP, CERAMIC	1500PF			
C620	1-136-721-21	FILM	1.5MF	10%	400V	
C621	1-164-143-11	CERAMIC	0.001MF	10%	1KV	
C622	1-136-853-11	FILM	0.56MF	5%	200V	
C623	1-137-087-11	FILM	0.068MF	3%	0	
C624	1-126-771-11	ELECT	100MF	20%	160V	
C625	1-126-183-11	ELECT	1000MF	20%	16V	
C626	1-126-373-11	ELECT	470MF	20%	10V	
C628	1-161-830-00	CERAMIC	4700PF	10%	500V	
C629	1-124-607-11	ELECT	2200MF	20%	50V	
C631	1-126-803-11	ELECT	47MF	20%	50V	
C632	1-124-903-11	ELECT	1MF	20%	50V	
C633	1-130-483-00	MYLAR	0.01MF	5%	50V	
C634	1-126-803-11	ELECT	47MF	20%	16V	
C637 ⚠	1-136-311-51	FILM	0.47MF	20%	125V	
C638 ⚠	1-161-743-12	CERAMIC	0.0047MF		400V	
C639 ⚠	1-125-692-11	ELECT(BLOCK)	820MF	20%	200V	
C640 ⚠	1-136-311-51	FILM	0.47MF	20%	125V	
C641	1-126-101-11	ELECT	100MF	20%	16V	
C642 ⚠	1-161-743-12	CERAMIC	0.0047MF		400V	
C644	1-126-104-11	ELECT	470MF	20%	35V	

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF.NO.	PART NO.	DESCRIPTION				REMARK
C646	1-124-907-11	ELECT	10MF	20%	50V	
C647 ⚠	1-164-486-51	CERAMIC	0.0033MF	20%	400V	
C648 ⚠	1-125-692-11	ELECT(BLOCK)	820MF	20%	200V	
C649 ⚠	1-164-486-51	CERAMIC	0.0033MF	20%	400V	
C650 ⚠	1-161-743-12	CERAMIC	0.0047MF		400V	
C660	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C661	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C662	1-124-910-11	ELECT	47MF	20%	35V	
C663	1-126-017-11	ELECT	6800MF	20%	16V	
C664	1-126-017-11	ELECT	6800MF	20%	16V	
C670	1-102-074-00	CERAMIC	0.001MF	10%	50V	
		<DIODE>				
D602	8-719-979-58	DIODE EGP10D				
D603	8-719-500-67	DIODE D5KC40H				
D604	8-719-510-09	DIODE D10SC6M				
D605	8-719-988-31	DIODE D10SC6MR				
D607	8-719-025-81	DIODE S3V10SB				
D608	8-719-109-85	DIODE RD5.1ESB2				
D609	8-719-109-84	DIODE RD5.1ESB1				
D610	8-719-979-58	DIODE EGP10D				
D611	8-719-979-58	DIODE EGP10D				
D613	8-719-303-57	DIODE RU2AM				
D614	8-719-979-58	DIODE EGP10D				
D615	8-719-975-76	DIODE SB140				
D616	8-719-025-81	DIODE S3V10SB				
D617	8-719-110-02	DIODE RD7.5ESB1				
D618	8-719-911-19	DIODE 1SS119				
D619	8-719-975-76	DIODE SB140				
D620 ⚠	8-719-988-31	DIODE D10SC6MR				
D621	8-719-908-03	DIODE GP08D				
D622	8-719-908-03	DIODE GP08D				
D623	8-719-110-63	DIODE RD24ESB3				
D624	8-719-109-89	DIODE RD5.6ESB2				
D626	8-719-908-03	DIODE GP08D				
D628	8-719-110-49	DIODE RD18ESB2				
D629	8-719-911-19	DIODE 1SS119				
D631	8-719-911-19	DIODE 1SS119				
D632	8-719-511-40	DIODE S1VB40				
D633 ⚠	8-719-505-60	DIODE S5VB60				
D634	8-719-911-19	DIODE 1SS119				
D636	8-719-109-85	DIODE RD5.1ESB2				
D638	8-719-911-19	DIODE 1SS119				
D640 ⚠	8-719-510-09	DIODE D10SC6M				
D650	8-719-160-81	DIODE RD27FB2				
		<FUSE>				
F601 ⚠	1-532-748-11	FUSE, GLASS TUBE (6.3A/125V)				
		<FERRITE BEAD>				
FB602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB606	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB607	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB608	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB612	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB622	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB630	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB631	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<CONNECTOR>				
G-1	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P				
G-2	*1-564-512-11	PLUG, CONNECTOR 9P				
G-3	*1-564-507-11	PLUG, CONNECTOR 4P				
G-4	*1-564-511-51	PLUG, CONNECTOR 8P				
G-5	*1-564-508-11	PLUG, CONNECTOR 5P				
G-7	*1-564-507-11	PLUG, CONNECTOR 4P				
G-8	*1-580-843-11	PIN, CONNECTOR (POWER)				
G-9	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P				
G-10	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P				
G-11	*1-564-511-71	PLUG, CONNECTOR 8P				
G-12	*1-564-505-11	PLUG, CONNECTOR 2P				
		<IC>				
IC601 ⚠	8-749-921-89	IC SE115N				
IC602	8-759-231-58	IC TA7812S				
		<JUMPER COIL>				
JW76	1-408-421-00	INDUCTOR	100UH			
		<COIL>				
L602	1-459-862-11	COIL, CHOKE 90UH				
L604	1-408-404-00	INDUCTOR	3.9UH			
L605	1-412-526-11	INDUCTOR	12UH			
L607	1-408-404-00	INDUCTOR	3.9UH			
L611	1-412-546-41	INDUCTOR	560UH			
L612	1-412-540-31	INDUCTOR	180UH			
L613	1-412-522-41	INDUCTOR	5.6UH			
		<TRANSISTOR>				
Q603	8-729-011-15	TRANSISTOR 2SC4582NP				
Q604	8-729-119-80	TRANSISTOR 2SC2688-LK				
Q607	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q608	8-729-326-11	TRANSISTOR 2SC2611				
Q609	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q610	8-729-820-82	TRANSISTOR 2SA1208-S				
Q611	8-729-820-82	TRANSISTOR 2SA1208-S				
Q612	8-729-386-12	TRANSISTOR 2SB861-C				
Q613	8-729-209-15	TRANSISTOR 2SD2012				
Q614	8-729-011-15	TRANSISTOR 2SC4582NP				
Q615	8-729-820-82	TRANSISTOR 2SA1208-S				
Q616	8-729-208-39	TRANSISTOR 2SA1306A-Y				
Q618	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q620	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q621	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q623	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q629	8-729-378-84	TRANSISTOR 2SD788-5				
Q630	8-729-255-12	TRANSISTOR 2SC2551-O				
		<RESISTOR>				
R604	1-202-933-11	FUSIBLE	0.1	10%	1/2W	F
R605	1-249-428-11	CARBON	8.2K	5%	1/4W	
R606	1-214-919-00	METAL	180K	1%	1/2W	
R609	1-249-434-11	CARBON	27K	5%	1/4W	F
R610	1-215-469-00	METAL	100K	1%	1/4W	
R611	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R612	1-202-883-11	SOLID	680K	20%	1/2W	
R613 ⚠	1-216-386-91	METAL OXIDE	0.56	5%	3W	F

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Ne les remplacer que par une piece portant le numero specifie.

REF.NO.		PART NO.	DESCRIPTION				REMARK
R614		1-249-418-11	CARBON	1.2K	5%	1/4W	
R615		1-215-438-00	METAL	5.1K	1%	1/4W	
R616		1-215-436-00	METAL	4.3K	1%	1/4W	
R617	⚠	1-216-356-91	METAL OXIDE	3.9	5%	1W	F
R618		1-249-418-11	CARBON	1.2K	5%	1/4W	
R619	⚠	1-216-444-91	METAL OXIDE	82K	5%	1W	F
R620		1-249-418-11	CARBON	1.2K	5%	1/4W	F
R621		1-247-691-11	CARBON	18	5%	1/4W	F
R622		1-249-424-11	CARBON	3.9K	5%	1/4W	F
R623		1-249-417-11	CARBON	1K	5%	1/4W	
R624		1-214-780-00	METAL	130K	1%	1/4W	
R625	⚠	1-216-386-91	METAL OXIDE	0.56	5%	3W	F
R626	⚠	1-216-356-91	METAL OXIDE	3.9	5%	1W	F
R627		1-202-883-11	SOLID	680K	20%	1/2W	
R628		1-249-410-11	CARBON	270	5%	1/4W	F
R629	⚠	1-217-249-11	WIREWOUND	1	10%	3W	F
R631		1-249-417-11	CARBON	1K	5%	1/4W	F
R632		1-214-913-00	METAL	100K	1%	1/2W	
R633		1-249-429-11	CARBON	10K	5%	1/4W	
R634		1-249-441-11	CARBON	100K	5%	1/4W	
R635	⚠	1-215-897-91	METAL OXIDE	6.8K	5%	2W	F
R636		1-260-065-11	CARBON	1.2	5%	1/2W	
R638		1-249-405-11	CARBON	100	5%	1/4W	F
R639		1-249-405-11	CARBON	100	5%	1/4W	F
R640		1-249-421-11	CARBON	2.2K	5%	1/4W	F
R641		1-249-429-11	CARBON	10K	5%	1/4W	
R642		1-215-421-00	METAL	1K	1%	1/4W	
R643		1-260-123-11	CARBON	100K	5%	1/2W	
R644		1-249-415-11	CARBON	680	5%	1/4W	
R645		1-249-417-11	CARBON	1K	5%	1/4W	
R649		1-249-424-11	CARBON	3.9K	5%	1/4W	
R650		1-249-377-11	CARBON	0.47	5%	1/4W	F
R651		1-215-429-00	METAL	2.2K	1%	1/4W	
⧓R652	⚠		METAL			1/4W	
R654		1-215-429-00	METAL	2.2K	1%	1/4W	
R655		1-249-426-11	CARBON	5.6K	5%	1/4W	
R656		1-215-454-00	METAL	24K	1%	1/4W	
R657	⚠	1-216-386-91	METAL OXIDE	0.56	5%	3W	F
R660		1-249-413-11	CARBON	470	5%	1/4W	
R661	⚠	1-202-884-91	SOLID	820K	20%	1/2W	
R662	⚠	1-205-900-11	WIREWOUND	1.2	5%	15W	
R663	⚠	1-215-904-91	METAL OXIDE	100K	5%	2W	F
R666		1-249-377-11	CARBON	0.47	5%	1/4W	F
R667	⚠	1-202-888-91	SOLID	2.2M	20%	1/2W	
R668	⚠	1-215-904-91	METAL OXIDE	100K	5%	2W	F
R669		1-249-377-11	CARBON	0.47	5%	1/4W	F
R675		1-249-377-11	CARBON	0.47	5%	1/4W	F
R687		1-249-417-11	CARBON	1K	5%	1/4W	F
R689		1-247-742-11	CARBON	180	5%	1/2W	F
R691		1-249-421-11	CARBON	2.2K	5%	1/4W	
R694		1-249-421-11	CARBON	2.2K	5%	1/4W	
R697		1-249-382-11	CARBON	1.2	5%	1/4W	F
R698	⚠	1-216-386-91	METAL OXIDE	0.56	5%	3W	F

<RELAY>

RY601	⚠	1-515-805-11	RELAY, POWER
RY602	⚠	1-515-805-11	RELAY, POWER

<TRANSFORMER>

T601	⚠	1-450-791-12	TRANSFORMER, POWER ISOLATION
T603	⚠	1-424-020-11	PRT
T604	⚠	1-450-149-11	TRANSFORMER, HEATER
T605	⚠	1-424-023-12	TRANSFORMER, LINE FILTER
T606	⚠	1-421-372-21	TRANSFORMER, FERRITE (LFT)
T608	⚠	1-423-665-11	TRANSFORMER, POWER

<VARISTOR>

VDR601	⚠	1-809-786-11	VARISTOR

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	*A-1331-259-A		CR BOARD, COMPLETE
			**********

<CAPACITOR>

C701	1-162-115-00	CERAMIC	330PF	10%	2KV
C702	1-123-948-00	ELECT	22MF	20%	250V
C703	1-102-050-00	CERAMIC	0.01MF		500V
C704	1-162-115-00	CERAMIC	330PF	10%	2KV
C705	1-130-479-00	MYLAR	0.0047MF	5%	50V
C706	1-101-006-00	CERAMIC	0.047MF		50V
C707	1-101-006-00	CERAMIC	0.047MF		50V
C709	1-124-120-11	ELECT	220MF	20%	16V
C710	1-124-120-11	ELECT	220MF	20%	16V
C711	1-102-114-00	CERAMIC	470PF	10%	50V

<CONNECTOR>

CR1	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P
CR3	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
CR4	*1-564-511-11	PLUG, CONNECTOR 8P
CR15	*1-564-508-11	PLUG, CONNECTOR 5P

<SOCKET>

CRT701	⚠	1-251-026-11	SOCKET, PICTURE TUBE

<DIODE>

D701	8-719-911-19	DIODE 1SS119
D702	8-719-911-19	DIODE 1SS119
D703	8-719-911-19	DIODE 1SS119
D704	8-719-911-19	DIODE 1SS119
D705	8-719-911-19	DIODE 1SS119
D706	8-719-911-19	DIODE 1SS119
D707	8-719-110-36	DIODE RD13ESB2

<COIL>

L701	1-408-429-00	INDUCTOR 470UH
L702	1-408-159-00	COIL, SPOOK CHOKE 3.3UH
L703	1-408-159-00	COIL, SPOOK CHOKE 3.3UH
L704	1-408-413-00	INDUCTOR 22UH

<NEON LAMP>

NL701	1-519-108-XX	LAMP, NEON
NL702	1-519-108-XX	LAMP, NEON

<TRANSISTOR>

Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q703	8-729-119-80	TRANSISTOR 2SC2688-LK
	4-373-933-01	SHEET (TRANSISTOR), BN; Q703

- The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

CR **CG**

REF.NO.	PART NO.	DESCRIPTION				REMARK
	4-382-854-11	SCREW (M3X10), P, SW (+); Q703				
Q704	8-729-255-12	TRANSISTOR 2SC2551-O				
Q705	8-729-200-17	TRANSISTOR 2SA1091-O				
Q706	8-729-200-17	TRANSISTOR 2SA1091-O				
		<RESISTOR>				
R701	1-202-847-00	SOLID	560K	20%	1/2W	
R702	1-202-814-11	SOLID	33K	20%	1/2W	
R703	1-202-818-00	SOLID	1K	20%	1/2W	
R704	1-202-842-11	SOLID	220K	20%	1/2W	
R705	1-202-828-11	SOLID	6.8K	20%	1/2W	
R706	1-202-561-00	SOLID	330	20%	1/2W	
R707	⚠1-216-510-51	METAL OXIDE	8.2K	5%	5W	F
R708	1-249-405-11	CARBON	100	5%	1/4W	F
R709	1-249-405-11	CARBON	100	5%	1/4W	F
R710	⚠1-215-927-91	METAL OXIDE	47K	5%	3W	F
R711	1-249-405-11	CARBON	100	5%	1/4W	F
R712	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R714	1-249-401-11	CARBON	47	5%	1/4W	
R716	1-249-405-11	CARBON	100	5%	1/4W	
R717	1-249-403-11	CARBON	68	5%	1/4W	
R718	1-249-412-11	CARBON	390	5%	1/4W	
R719	1-249-410-11	CARBON	270	5%	1/4W	
R720	1-249-405-11	CARBON	100	5%	1/4W	
R721	1-249-409-11	CARBON	220	5%	1/4W	
R722	1-215-423-00	METAL	1.2K	1%	1/4W	
R723	1-249-410-11	CARBON	270	5%	1/4W	
R724	1-215-429-00	METAL	2.2K	1%	1/4W	
		<SPARK GAP>				
SG701	1-519-422-11	GAP, SPARK				
SG702	1-519-422-11	GAP, SPARK				
**********						
	*A-1331-260-A	CG BOARD, COMPLETE				
		**********				
	4-373-933-01	SHEET (TRANSISTOR), BN				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
		<CAPACITOR>				
C731	1-162-115-00	CERAMIC	330PF	10%	2KV	
C732	1-123-948-00	ELECT	22MF	20%	250V	
C733	1-102-050-00	CERAMIC	0.01MF		500V	
C734	1-162-115-00	CERAMIC	330PF	10%	2KV	
C735	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C736	1-101-006-00	CERAMIC	0.047MF		50V	
C737	1-101-006-00	CERAMIC	0.047MF		50V	
C739	1-124-120-11	ELECT	220MF	20%	16V	
C740	1-124-120-11	ELECT	220MF	20%	16V	
C741	1-102-114-00	CERAMIC	470PF	10%	50V	
		<CONNECTOR>				
CG1	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P				
CG3	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P				
CG16	*1-564-508-11	PLUG, CONNECTOR 5P				
		<SOCKET>				
CRT731	⚠1-251-026-11	SOCKET, PICTURE TUBE				

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<DIODE>				
D731	8-719-911-19	DIODE 1SS119				
D732	8-719-911-19	DIODE 1SS119				
D733	8-719-911-19	DIODE 1SS119				
D734	8-719-911-19	DIODE 1SS119				
D735	8-719-911-19	DIODE 1SS119				
D736	8-719-911-19	DIODE 1SS119				
D737	8-719-911-19	DIODE 1SS119				
		<COIL>				
L731	1-408-429-00	INDUCTOR	470UH			
L732	1-408-159-00	COIL, SPOOK CHOKE 3.3UH				
L733	1-408-159-00	COIL, SPOOK CHOKE 3.3UH				
L734	1-408-413-00	INDUCTOR	22UH			
		<NEON LAMP>				
NL731	1-519-108-XX	LAMP, NEON				
NL732	1-519-108-XX	LAMP, NEON				
		<TRANSISTOR>				
Q731	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q732	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q733	8-729-119-80	TRANSISTOR 2SC2688-LK				
Q734	8-729-255-12	TRANSISTOR 2SC2551-O				
Q735	8-729-200-17	TRANSISTOR 2SA1091-O				
Q736	8-729-200-17	TRANSISTOR 2SA1091-O				
		<RESISTOR>				
R731	1-202-847-00	SOLID	560K	20%	1/2W	
R732	1-202-814-11	SOLID	33K	20%	1/2W	
R733	1-202-818-00	SOLID	1K	20%	1/2W	
R734	1-202-842-11	SOLID	220K	20%	1/2W	
R735	1-202-828-11	SOLID	6.8K	20%	1/2W	
R736	1-202-561-00	SOLID	330	20%	1/2W	
R737	⚠1-216-510-51	METAL OXIDE	8.2K	5%	5W	F
R738	1-249-405-11	CARBON	100	5%	1/4W	F
R739	1-249-405-11	CARBON	100	5%	1/4W	F
R740	⚠1-215-927-91	METAL OXIDE	47K	5%	3W	F
R741	1-249-405-11	CARBON	100	5%	1/4W	F
R742	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R744	1-249-401-11	CARBON	47	5%	1/4W	
R745	1-215-455-00	METAL	27K	1%	1/4W	
R746	1-249-405-11	CARBON	100	5%	1/4W	
R747	1-249-403-11	CARBON	68	5%	1/4W	
R748	1-249-412-11	CARBON	390	5%	1/4W	
R749	1-249-410-11	CARBON	270	5%	1/4W	
R750	1-249-405-11	CARBON	100	5%	1/4W	
R751	1-249-409-11	CARBON	220	5%	1/4W	
R752	1-215-423-00	METAL	1.2K	1%	1/4W	
R754	1-215-429-00	METAL	2.2K	1%	1/4W	
		<SPARK GAP>				
SG731	1-519-422-11	GAP, SPARK				
SG732	1-519-422-11	GAP, SPARK				
**********						

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

CB V

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1331-261-A	CB BOARD, COMPLETE			
		**********			
	4-373-933-01	SHEET (TRANSISTOR), BN			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C761	1-162-115-00	CERAMIC	330PF	10%	2KV
C762	1-123-948-00	ELECT	22MF	20%	250V
C763	1-102-050-00	CERAMIC	0.01MF		500V
C764	1-162-115-00	CERAMIC	330PF	10%	2KV
C765	1-130-479-00	MYLAR	0.0047MF	5%	50V
C766	1-101-006-00	CERAMIC	0.047MF		50V
C767	1-101-006-00	CERAMIC	0.047MF		50V
C769	1-124-120-11	ELECT	220MF	20%	16V
C770	1-124-120-11	ELECT	220MF	20%	16V
C771	1-102-114-00	CERAMIC	470PF	10%	50V
		<CONNECTOR>			
CB1	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P			
CB3	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			
CB4	*1-564-511-11	PLUG, CONNECTOR 8P			
CB5	*1-564-511-11	PLUG, CONNECTOR 8P			
CB17	*1-564-508-11	PLUG, CONNECTOR 5P			
		<SOCKET>			
CRT761	⚠1-251-026-11	SOCKET, PICTURE TUBE			
		<DIODE>			
D761	8-719-911-19	DIODE 1SS119			
D762	8-719-911-19	DIODE 1SS119			
D763	8-719-911-19	DIODE 1SS119			
D764	8-719-911-19	DIODE 1SS119			
D765	8-719-911-19	DIODE 1SS119			
D766	8-719-911-19	DIODE 1SS119			
D768	8-719-911-19	DIODE 1SS119			
D769	8-719-109-81	DIODE RD4.7ESB2			
		<COIL>			
L761	1-408-429-00	INDUCTOR	470UH		
L762	1-408-159-00	COIL, SPOOK CHOKE 3.3UH			
L763	1-408-159-00	COIL, SPOOK CHOKE 3.3UH			
L764	1-408-413-00	INDUCTOR	22UH		
		<NEON LAMP>			
NL761	1-519-108-XX	LAMP, NEON			
NL762	1-519-108-XX	LAMP, NEON			
		<TRANSISTOR>			
Q761	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q762	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q763	8-729-119-80	TRANSISTOR 2SC2688-LK			
Q764	8-729-255-12	TRANSISTOR 2SC2551-O			
Q765	8-729-200-17	TRANSISTOR 2SA1091-O			
Q766	8-729-200-17	TRANSISTOR 2SA1091-O			
		<RESISTOR>			
R761	1-202-847-00	SOLID	560K	20% 1/2W	
R762	1-202-814-11	SOLID	33K	20% 1/2W	
R763	1-202-818-00	SOLID	1K	20% 1/2W	
R764	1-202-842-11	SOLID	220K	20% 1/2W	
R765	1-202-828-11	SOLID	6.8K	20% 1/2W	
R766	1-202-561-00	SOLID	330	20% 1/2W	
R767	⚠1-216-510-51	METAL OXIDE	8.2K	5% 5W	F
R768	1-249-405-11	CARBON	100	5% 1/4W	F
R769	1-249-405-11	CARBON	100	5% 1/4W	F
R770	⚠1-215-927-91	METAL OXIDE	47K	5% 3W	F
R771	1-249-405-11	CARBON	100	5% 1/4W	F
R772	1-249-421-11	CARBON	2.2K	5% 1/4W	F
R773	1-249-413-11	CARBON	470	5% 1/4W	
R774	1-249-401-11	CARBON	47	5% 1/4W	
R776	1-249-405-11	CARBON	100	5% 1/4W	
R777	1-249-403-11	CARBON	68	5% 1/4W	
R778	1-249-412-11	CARBON	390	5% 1/4W	
R779	1-249-415-11	CARBON	680	5% 1/4W	
R780	1-249-405-11	CARBON	100	5% 1/4W	
R781	1-249-409-11	CARBON	220	5% 1/4W	
R782	1-215-423-00	METAL	1.2K	1% 1/4W	
R783	1-215-433-00	METAL	3.3K	1% 1/4W	
R784	1-215-429-00	METAL	2.2K	1% 1/4W	
R785	1-215-418-00	METAL	750	1% 1/4W	
		<SPARK GAP>			
SG761	1-519-422-11	GAP, SPARK			
SG762	1-519-422-11	GAP, SPARK			

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	*A-1342-214-A	V BOARD, COMPLETE			
		**********			
	*4-395-527-01	HOLDER (B), TR			
		<CAPACITOR>			
C1501	1-102-129-00	CERAMIC	0.01MF	10%	50V
C1502	1-126-101-11	ELECT	100MF	20%	16V
C1504	1-106-383-00	MYLAR	0.047MF		200V
C1505	1-124-907-11	ELECT	10MF	20%	50V
C1506	1-106-359-00	MYLAR	0.0047MF	10%	200V
C1507	1-106-367-00	MYLAR	0.01MF	10%	100V
C1508	1-162-318-11	CERAMIC	0.001MF	10%	500V
C1509	1-106-367-00	MYLAR	0.01MF	10%	100V
C1510	1-126-355-11	ELECT	33MF	20%	160V
C1511	1-124-668-11	ELECT	2.2MF	20%	200V
C1512	1-106-391-12	MYLAR	0.1MF	10%	200V
C1513	1-162-318-11	CERAMIC	0.001MF	10%	500V
C1514	1-102-951-00	CERAMIC	15PF	5%	50V
C1515	1-102-959-00	CERAMIC	22PF	5%	50V
C1516	1-102-963-00	CERAMIC	33PF	5%	50V
C1517	1-123-875-11	ELECT	10MF	20%	50V
C1518	1-102-074-00	CERAMIC	0.001MF	10%	50V
C1519	1-106-359-00	MYLAR	0.0047MF	10%	200V
C1520	1-126-803-11	ELECT	47MF	20%	16V
C1521	1-124-907-11	ELECT	10MF	20%	50V
C1534	1-101-003-00	CERAMIC	0.0047MF		50V
C1551	1-124-122-11	ELECT	100MF	20%	50V
C1552	1-124-122-11	ELECT	100MF	20%	50V
C1553	1-102-824-00	CERAMIC	470PF	5%	50V
C1554	1-102-824-00	CERAMIC	470PF	5%	50V
C1555	1-130-483-00	MYLAR	0.01MF	5%	50V
C1556	1-130-483-00	MYLAR	0.01MF	5%	50V

The components identified by shading and mark ⚠ are critical for safety.
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Ne les remplacer que par une piece portant le numero specifie.

V **D**

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1557	1-102-824-00	CERAMIC	470PF	5%	50V	
C1558	1-102-824-00	CERAMIC	470PF	5%	50V	
C1559	1-102-824-00	CERAMIC	470PF	5%	50V	
C1560	1-102-824-00	CERAMIC	470PF	5%	50V	
C1561	1-130-483-00	MYLAR	0.01MF	5%	50V	
C1562	1-130-483-00	MYLAR	0.01MF	5%	50V	
C1563	1-130-483-00	MYLAR	0.01MF	5%	50V	
		<DIODE>				
D1501	8-719-911-19	DIODE ISS119				
D1502	8-719-911-19	DIODE ISS119				
D1503	8-719-911-19	DIODE ISS119				
D1504	8-719-911-19	DIODE ISS119				
D1505	8-719-911-19	DIODE ISS119				
D1506	8-719-911-19	DIODE ISS119				
D1507	8-719-110-88	DIODE RD39ESB2				
D1508	8-719-110-88	DIODE RD39ESB2				
D1509	8-719-911-19	DIODE ISS119				
		<IC>				
IC1551	8-759-145-58	IC UPC4558C				
IC1552	8-759-912-77	IC LM324N				
		<COIL>				
L1502	1-408-418-00	INDUCTOR	56UH			
		<TRANSISTOR>				
Q1501	8-729-208-39	TRANSISTOR 2SA1306A-Y				
Q1502	8-729-017-06	TRANSISTOR 2SC4793				
Q1503	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1504	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1505	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q1506	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1507	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1508	8-729-142-86	TRANSISTOR 2SC3733				
Q1551	8-729-231-60	TRANSISTOR 2SD1406-YGR				
Q1552	8-729-202-02	TRANSISTOR 2SB1015-Y				
Q1553	8-729-231-60	TRANSISTOR 2SD1406-YGR				
Q1554	8-729-202-02	TRANSISTOR 2SB1015-Y				
Q1555	8-729-231-60	TRANSISTOR 2SD1406-YGR				
Q1556	8-729-202-02	TRANSISTOR 2SB1015-Y				
		<RESISTOR>				
R1501	1-249-451-11	CARBON	2.2	5%	1/4W	F
R1502	1-249-414-11	CARBON	560	5%	1/4W	F
R1503	1-247-734-11	CARBON	39	5%	1/2W	F
R1504	1-249-384-11	CARBON	1.8	5%	1/4W	F
R1505	1-249-405-11	CARBON	100	5%	1/4W	
R1506	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1507	1-249-412-11	CARBON	390	5%	1/4W	
R1508	1-249-436-11	CARBON	39K	5%	1/4W	
R1509	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1510	1-249-436-11	CARBON	39K	5%	1/4W	
R1511	1-249-418-11	CARBON	1.2K	5%	1/4W	
R1512	1-249-441-11	CARBON	100K	5%	1/4W	
R1513	1-249-432-11	CARBON	18K	5%	1/4W	
R1514	1-249-405-11	CARBON	100	5%	1/4W	
R1515	1-249-435-11	CARBON	33K	5%	1/4W	
R1517	1-247-713-11	CARBON	1K	5%	1/4W	F
R1519 ⚠	1-215-916-91	METAL OXIDE	680	5%	3W	F
R1520	1-249-432-11	CARBON	18K	5%	1/4W	
R1521	1-249-414-11	CARBON	560	5%	1/4W	
R1522	1-249-384-11	CARBON	1.8	5%	1/4W	F
R1523	1-249-400-11	CARBON	39	5%	1/4W	F
R1524	1-249-418-11	CARBON	1.2K	5%	1/4W	
R1525	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1526	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1527	1-249-414-11	CARBON	560	5%	1/4W	
R1528	1-249-429-11	CARBON	10K	5%	1/4W	
R1529	1-249-414-11	CARBON	560	5%	1/4W	
R1530 ⚠	1-216-451-91	METAL OXIDE	120	5%	2W	F
R1531	1-249-429-11	CARBON	10K	5%	1/4W	
R1532	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1533	1-247-903-00	CARBON	1M	5%	1/4W	
R1534	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1535	1-249-392-11	CARBON	8.2	5%	1/4W	F
R1540	1-215-445-00	METAL	10K	1%	1/4W	
R1541	1-215-445-00	METAL	10K	1%	1/4W	
R1542	1-215-445-00	METAL	10K	1%	1/4W	
R1551	1-215-445-00	METAL	10K	1%	1/4W	
R1552	1-215-423-00	METAL	1.2K	1%	1/4W	
R1553	1-249-417-11	CARBON	1K	5%	1/4W	
R1554	1-215-445-00	METAL	10K	1%	1/4W	
R1555	1-215-375-00	METAL	12	1%	1/4W	
R1556	1-215-375-00	METAL	12	1%	1/4W	
R1557	1-215-375-00	METAL	12	1%	1/4W	
R1558	1-215-445-00	METAL	10K	1%	1/4W	
R1559	1-215-445-00	METAL	10K	1%	1/4W	
R1560	1-215-445-00	METAL	10K	1%	1/4W	
R1561	1-215-423-00	METAL	1.2K	1%	1/4W	
R1562	1-215-423-00	METAL	1.2K	1%	1/4W	
R1563	1-215-445-00	METAL	10K	1%	1/4W	
R1564	1-249-417-11	CARBON	1K	5%	1/4W	
R1565	1-215-445-00	METAL	10K	1%	1/4W	
R1566	1-215-375-00	METAL	12	1%	1/4W	
R1567	1-215-375-00	METAL	12	1%	1/4W	
R1568	1-215-375-00	METAL	12	1%	1/4W	
R1569	1-215-445-00	METAL	10K	1%	1/4W	
R1570	1-215-445-00	METAL	10K	1%	1/4W	
R1571	1-249-417-11	CARBON	1K	5%	1/4W	
R1572	1-215-445-00	METAL	10K	1%	1/4W	
R1573	1-215-375-00	METAL	12	1%	1/4W	
R1574	1-215-375-00	METAL	12	1%	1/4W	
R1575	1-215-375-00	METAL	12	1%	1/4W	
R1576	1-215-445-00	METAL	10K	1%	1/4W	
R1577	1-215-445-00	METAL	10K	1%	1/4W	
R1578	1-249-417-11	CARBON	1K	5%	1/4W	
R1579	1-249-417-11	CARBON	1K	5%	1/4W	
R1580	1-249-417-11	CARBON	1K	5%	1/4W	
R1581	1-249-432-11	CARBON	18K	5%	1/4W	
R1582	1-249-432-11	CARBON	18K	5%	1/4W	
		<CONNECTOR>				
V2	*1-564-518-11	PLUG, CONNECTOR 3P				
V22	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P				

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*A-1346-117-A D BOARD, COMPLETE
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1-533-223-11 CLIP, FUSE
4-382-854-11 SCREW (M3X10), P, SW (+)

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*4-395-527-01	HOLDER (B), TR			
		<CAPACITOR>			
C901	1-126-320-11	ELECT	10MF	20%	16V
C902	1-124-477-11	ELECT	47MF	20%	16V
C903	1-130-471-00	MYLAR	0.001MF	5%	50V
C904	1-130-471-00	MYLAR	0.001MF	5%	50V
C905	1-124-477-11	ELECT	47MF	20%	16V
C906	1-126-233-11	ELECT	22MF	20%	50V
C907	1-126-101-11	ELECT	100MF	20%	16V
C908	1-124-907-11	ELECT	10MF	20%	50V
C910	1-130-483-00	MYLAR	0.01MF	5%	50V
C911	1-131-341-00	TANTALUM	0.1MF	20%	16V
C912	1-124-903-11	ELECT	1MF	20%	50V
C913	1-126-233-11	ELECT	22MF	20%	50V
C914	1-126-803-11	ELECT	47MF	20%	16V
C915	1-124-927-11	ELECT	4.7MF	20%	50V
C916	1-102-074-00	CERAMIC	0.001MF	10%	50V
C917	1-130-471-00	MYLAR	0.001MF	5%	50V
C918	1-102-963-00	CERAMIC	33PF	5%	50V
C919	1-102-963-00	CERAMIC	33PF	5%	50V
C920	1-102-963-00	CERAMIC	33PF	5%	50V
C921	1-102-963-00	CERAMIC	33PF	5%	50V
C922	1-102-963-00	CERAMIC	33PF	5%	50V
C923	1-102-963-00	CERAMIC	33PF	5%	50V
C931	1-102-973-00	CERAMIC	100PF	5%	50V
C932	1-124-903-11	ELECT	1MF	20%	50V
C933	1-124-234-00	ELECT	22MF	20%	16V
C934	1-124-234-00	ELECT	22MF	20%	16V
C935	1-124-234-00	ELECT	22MF	20%	16V
C936	1-124-234-00	ELECT	22MF	20%	16V
C937	1-124-234-00	ELECT	22MF	20%	16V
C938	1-124-234-00	ELECT	22MF	20%	16V
C939	1-124-234-00	ELECT	22MF	20%	16V
C940	1-124-916-11	ELECT	22MF	20%	25V
C941	1-102-123-00	CERAMIC	0.0033MF	10%	50V
C942	1-102-123-00	CERAMIC	0.0033MF	10%	50V
C943	1-102-123-00	CERAMIC	0.0033MF	10%	50V
C1701	1-124-907-11	ELECT	10MF	20%	50V
C1702	1-124-907-11	ELECT	10MF	20%	50V
C1703	1-124-907-11	ELECT	10MF	20%	50V
C1704	1-123-875-11	ELECT	10MF	20%	50V
C1705	1-102-963-00	CERAMIC	33PF	5%	50V
C1706	1-102-963-00	CERAMIC	33PF	5%	50V
C1707	1-102-963-00	CERAMIC	33PF	5%	50V
C1708	1-102-963-00	CERAMIC	33PF	5%	50V
C1709	1-102-963-00	CERAMIC	33PF	5%	50V
C1710	1-102-963-00	CERAMIC	33PF	5%	50V
C1711	1-126-233-11	ELECT	22MF	20%	50V
C1712	1-124-916-11	ELECT	22MF	20%	25V
C1713	1-102-074-00	CERAMIC	0.001MF	10%	50V
C1714	1-124-478-11	ELECT	100MF	20%	25V
C1715	1-124-478-11	ELECT	100MF	20%	25V
C1716	1-126-803-11	ELECT	47MF	20%	25V
C1717	1-126-803-11	ELECT	47MF	20%	25V
C1718	1-102-074-00	CERAMIC	0.001MF	10%	50V
C1719	1-124-234-00	ELECT	22MF	20%	16V
C1720	1-130-491-00	MYLAR	0.047MF	5%	50V
C1721	1-130-491-00	MYLAR	0.047MF	5%	50V
C1722	1-130-491-00	MYLAR	0.047MF	5%	50V
C1724	1-124-234-00	ELECT	22MF	20%	16V
C1725	1-102-963-00	CERAMIC	33PF	5%	50V
C1726	1-124-122-11	ELECT	100MF	20%	35V
C1727	1-102-963-00	CERAMIC	33PF	5%	50V
C1728	1-102-963-00	CERAMIC	33PF	5%	50V
C1729	1-108-426-91	MYLAR	0.027MF		200V
C1730	1-102-963-00	CERAMIC	33PF	5%	50V
C1731	1-124-122-11	ELECT	100MF	20%	35V
C1732	1-108-426-91	MYLAR	0.027MF		200V
C1733	1-102-963-00	CERAMIC	33PF	5%	50V
C1734	1-102-963-00	CERAMIC	33PF	5%	50V
C1735	1-124-122-11	ELECT	100MF	20%	35V
C1736	1-108-426-91	MYLAR	0.027MF		200V
C1737	1-124-937-11	ELECT	10MF	20%	16V
C1738	1-124-122-11	ELECT	100MF	20%	35V
C1739	1-136-153-00	FILM	0.01MF	5%	50V
C1740	1-124-122-11	ELECT	100MF	20%	35V
C1741	1-124-122-11	ELECT	100MF	20%	35V
C1742	1-126-104-11	ELECT	470MF	20%	35V
C1744	1-124-478-11	ELECT	100MF	20%	25V
C1745	1-126-375-11	ELECT	100MF	20%	25V
C1755	1-106-220-00	MYLAR	0.1MF	10%	100V
C1756	1-106-220-00	MYLAR	0.1MF	10%	100V
C1757	1-106-220-00	MYLAR	0.1MF	10%	100V
C1758	1-106-220-00	MYLAR	0.1MF	10%	100V
C1759	1-106-220-00	MYLAR	0.1MF	10%	100V
C1760	1-106-220-00	MYLAR	0.1MF	10%	100V
C1763	1-126-096-11	ELECT	10MF	20%	25V
C1764	1-124-477-11	ELECT	47MF	20%	16V
C1765	1-124-477-11	ELECT	47MF	20%	16V
C1766	1-126-101-11	ELECT	100MF	20%	16V
C1769	1-126-157-11	ELECT	10MF	20%	16V
C1770	1-130-495-00	MYLAR	0.1MF	5%	50V
C1771	1-126-096-11	ELECT	10MF	20%	25V
C1772	1-126-096-11	ELECT	10MF	20%	25V
C1861	1-102-074-00	CERAMIC	0.001MF	10%	50V
		<CONNECTOR>			
D1	*1-564-510-11	PLUG, CONNECTOR 7P			
D2	*1-564-511-51	PLUG, CONNECTOR 8P			
D3	*1-564-512-11	PLUG, CONNECTOR 9P			
D4	*1-564-508-11	PLUG, CONNECTOR 5P			
D5	*1-564-511-51	PLUG, CONNECTOR 8P			
D6	1-691-169-11	PIN, CONNECTOR 12P			
D7	*1-564-507-11	PLUG, CONNECTOR 4P			
D8	*1-564-506-11	PLUG, CONNECTOR 3P			
D9	*1-564-507-11	PLUG, CONNECTOR 4P			
D14	*1-564-513-11	PLUG, CONNECTOR 10P			
		<DIODE>			
D901	8-719-911-19	DIODE 1SS119			
D902	8-719-911-19	DIODE 1SS119			
D1701	8-719-900-95	DIODE V09G			
D1702	8-719-911-19	DIODE 1SS119			
D1703	8-719-900-95	DIODE V09G			
D1704	8-719-900-95	DIODE V09G			
D1705	8-719-900-95	DIODE V09G			
D1706	8-719-900-95	DIODE V09G			
D1707	8-719-911-19	DIODE 1SS119			
D1708	8-719-911-19	DIODE 1SS119			
D1709	8-719-911-19	DIODE 1SS119			
D1710	8-719-911-19	DIODE 1SS119			
D1711	8-719-911-19	DIODE 1SS119			
D1712	8-719-911-19	DIODE 1SS119			
D1713	8-719-911-19	DIODE 1SS119			

D

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The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1714	8-719-911-19	DIODE 1SS119	
D1715	8-719-911-19	DIODE 1SS119	
D1716	8-719-911-19	DIODE 1SS119	
D1717	8-719-911-19	DIODE 1SS119	
D1718	8-719-911-19	DIODE 1SS119	
D1720	8-719-109-50	DIODE RD2.0ESB1	
D1721	8-719-109-50	DIODE RD2.0ESB1	
D1722	8-719-109-50	DIODE RD2.0ESB1	
D1723	8-719-109-50	DIODE RD2.0ESB1	
		<FUSE>	
F901 ⚠	1-532-745-11	FUSE, GLASS TUBE (3.15A/125V)	
F902 ⚠	1-532-745-11	FUSE, GLASS TUBE (3.15A/125V)	
		<IC>	
IC901	8-759-145-58	IC UPC4558C	
IC902	8-752-033-68	IC CXA1268P	
IC903	8-759-701-56	IC NJM78M05FA	
IC904	8-759-701-65	IC NJM79M05FA	
IC905	8-759-701-89	IC NJM7915FA	
IC906	8-759-148-84	IC UPC2415HF	
IC907	8-759-140-53	IC UPD4053BC	
IC908	8-759-145-58	IC UPC4558C	
IC910	8-759-054-40	IC PA0036	
IC1701	8-759-602-19	IC M5220L	
IC1702	8-759-602-19	IC M5220L	
IC1703	8-759-602-19	IC M5220L	
IC1704	8-749-923-16	IC STK4278-L	
IC1705	8-749-923-16	IC STK4278-L	
IC1706	8-759-113-13	IC UPC1498H	
IC1707	8-759-113-13	IC UPC1498H	
IC1708	8-759-113-13	IC UPC1498H	
IC1709	8-759-145-58	IC UPC4558C	
IC1710	8-759-145-58	IC UPC4558C	
IC1714	8-759-145-58	IC UPC4558C	
IC1715	8-759-145-58	IC UPC4558C	
IC1718	8-759-145-58	IC UPC4558C	
		<COIL>	
L901	1-459-313-00	COIL WITH CORE (HWC)	
L902	1-459-313-00	COIL WITH CORE (HWC)	
L903	1-459-313-00	COIL WITH CORE (HWC)	
L904	1-459-313-00	COIL WITH CORE (HWC)	
		<TRANSISTOR>	
Q902	8-729-900-89	TRANSISTOR DTC144ES	
Q906	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q907	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q908	8-729-900-89	TRANSISTOR DTC144ES	
Q909	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q910	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q911	8-729-119-76	TRANSISTOR 2SI175-HFE	
Q912	8-729-119-76	TRANSISTOR 2SI175-HFE	
		<RESISTOR>	
R901	1-215-463-00	METAL 56K 1% 1/4W	
R902	1-215-463-00	METAL 56K 1% 1/4W	
R903	1-215-449-00	METAL 15K 1% 1/4W	
R904	1-215-455-00	METAL 27K 1% 1/4W	
R905	1-215-449-00	METAL 15K 1% 1/4W	
R906	1-215-469-00	METAL 100K 1% 1/4W	
R907	1-215-469-00	METAL 100K 1% 1/4W	
R908	1-215-469-00	METAL 100K 1% 1/4W	
R909	1-215-473-00	METAL 150K 1% 1/4W	
R910	1-215-437-00	METAL 4.7K 1% 1/4W	
R911	1-215-453-00	METAL 22K 1% 1/4W	
R912	1-215-453-00	METAL 22K 1% 1/4W	
R913	1-215-437-00	METAL 4.7K 1% 1/4W	
R914	1-215-453-00	METAL 22K 1% 1/4W	
R915	1-215-413-00	METAL 470 1% 1/4W	
R916	1-215-457-00	METAL 33K 1% 1/4W	
R917	1-215-453-00	METAL 22K 1% 1/4W	
R919	1-215-399-00	METAL 120 1% 1/4W	
R920	1-215-399-00	METAL 120 1% 1/4W	
R921	1-215-399-00	METAL 120 1% 1/4W	
R922	1-215-399-00	METAL 120 1% 1/4W	
R923	1-215-441-00	METAL 6.8K 1% 1/4W	
R924	1-215-441-00	METAL 6.8K 1% 1/4W	
R925	1-215-441-00	METAL 6.8K 1% 1/4W	
R926	1-215-463-00	METAL 56K 1% 1/4W	
R927	1-215-463-00	METAL 56K 1% 1/4W	
R928	1-215-461-00	METAL 47K 1% 1/4W	
R929	1-215-433-00	METAL 3.3K 1% 1/4W	
R930	1-215-433-00	METAL 3.3K 1% 1/4W	
R931	1-215-433-00	METAL 3.3K 1% 1/4W	
R932	1-215-433-00	METAL 3.3K 1% 1/4W	
R933	1-215-433-00	METAL 3.3K 1% 1/4W	
R934	1-215-433-00	METAL 3.3K 1% 1/4W	
R935	1-215-439-00	METAL 5.6K 1% 1/4W	
R936	1-215-439-00	METAL 5.6K 1% 1/4W	
R937	1-215-439-00	METAL 5.6K 1% 1/4W	
R938	1-215-417-00	METAL 680 1% 1/4W	
R939	1-215-433-00	METAL 3.3K 1% 1/4W	
R940	1-215-429-00	METAL 2.2K 1% 1/4W	
R941	1-215-441-00	METAL 6.8K 1% 1/4W	
R942	1-215-451-00	METAL 18K 1% 1/4W	
R943	1-215-441-00	METAL 6.8K 1% 1/4W	
R944	1-215-439-00	METAL 5.6K 1% 1/4W	
R945	1-215-445-00	METAL 10K 1% 1/4W	
R946	1-215-445-00	METAL 10K 1% 1/4W	
R947	1-215-439-00	METAL 5.6K 1% 1/4W	
R948	1-215-447-00	METAL 12K 1% 1/4W	
R949	1-215-439-00	METAL 5.6K 1% 1/4W	
R950	1-215-429-00	METAL 2.2K 1% 1/4W	
R951	1-215-429-00	METAL 2.2K 1% 1/4W	
R952	1-215-429-00	METAL 2.2K 1% 1/4W	
R953	1-215-439-00	METAL 5.6K 1% 1/4W	
R954	1-215-439-00	METAL 5.6K 1% 1/4W	
R955	1-215-435-00	METAL 3.9K 1% 1/4W	
R956	1-215-437-00	METAL 4.7K 1% 1/4W	
R957	1-215-441-00	METAL 6.8K 1% 1/4W	
R958	1-215-437-00	METAL 4.7K 1% 1/4W	
R959	1-215-439-00	METAL 5.6K 1% 1/4W	
R960	1-215-439-00	METAL 5.6K 1% 1/4W	
R961	1-215-439-00	METAL 5.6K 1% 1/4W	
R962	1-215-441-00	METAL 6.8K 1% 1/4W	
R963	1-215-441-00	METAL 6.8K 1% 1/4W	
R964	1-215-441-00	METAL 6.8K 1% 1/4W	
R965 ⚠	1-215-909-91	METAL OXIDE 47 5% 3W	F
R966	1-215-469-00	METAL 100K 1% 1/4W	
R967	1-215-421-00	METAL 1K 1% 1/4W	
R968	1-215-437-00	METAL 4.7K 1% 1/4W	
R969	1-249-421-11	CARBON 2.2K 5% 1/4W	

D

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R970	⚠1-215-909-91	METAL OXIDE	47	5%	3W	F
R971	1-249-421-11	CARBON	2.2K	5%	1/4W	
R972	1-249-431-11	CARBON	15K	5%	1/4W	
R973	1-249-431-11	CARBON	15K	5%	1/4W	
R974	1-215-399-00	METAL	120	1%	1/4W	
R975	1-215-399-00	METAL	120	1%	1/4W	
R976	1-215-399-00	METAL	120	1%	1/4W	
R977	1-215-399-00	METAL	120	1%	1/4W	
R978	1-215-399-00	METAL	120	1%	1/4W	
R979	1-215-399-00	METAL	120	1%	1/4W	
R980	1-215-399-00	METAL	120	1%	1/4W	
R981	1-215-399-00	METAL	120	1%	1/4W	
R982	1-249-431-11	CARBON	15K	5%	1/4W	
R983	1-249-431-11	CARBON	15K	5%	1/4W	
R984	1-214-804-11	METAL	3.3	1%	1/2W	
R985	1-214-804-11	METAL	3.3	1%	1/2W	
R986	1-214-804-11	METAL	3.3	1%	1/2W	
R987	1-215-421-00	METAL	1K	1%	1/4W	
R988	1-215-421-00	METAL	1K	1%	1/4W	
R989	1-215-421-00	METAL	1K	1%	1/4W	
R990	1-215-421-00	METAL	1K	1%	1/4W	
R991	1-215-421-00	METAL	1K	1%	1/4W	
R992	1-215-421-00	METAL	1K	1%	1/4W	
R993	1-249-429-11	CARBON	10K	5%	1/4W	
R994	1-249-429-11	CARBON	10K	5%	1/4W	
R995	1-215-457-00	METAL	33K	1%	1/4W	
R997	1-215-463-00	METAL	56K	1%	1/4W	
R998	1-215-409-00	METAL	330	1%	1/4W	
R999	1-215-455-00	METAL	27K	1%	1/4W	
R1701	1-249-411-11	CARBON	330	5%	1/4W	
R1702	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1703	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1704	1-249-411-11	CARBON	330	5%	1/4W	
R1705	1-249-411-11	CARBON	330	5%	1/4W	
R1706	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1707	1-249-411-11	CARBON	330	5%	1/4W	
R1708	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1709	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1710	1-249-411-11	CARBON	330	5%	1/4W	
R1711	1-249-411-11	CARBON	330	5%	1/4W	
R1712	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1713	⚠1-215-886-91	METAL OXIDE	100	5%	2W	F
R1714	1-249-411-11	CARBON	330	5%	1/4W	
R1715	1-249-411-11	CARBON	330	5%	1/4W	
R1716	⚠1-215-886-91	METAL OXIDE	100	5%	2W	F
R1717	1-249-411-11	CARBON	330	5%	1/4W	
R1718	1-249-417-11	CARBON	1K	5%	1/4W	
R1719	1-214-792-00	METAL	1	1%	1/2W	
R1720	1-249-411-11	CARBON	330	5%	1/4W	
R1721	1-249-417-11	CARBON	1K	5%	1/4W	
R1722	1-249-411-11	CARBON	330	5%	1/4W	
R1723	1-249-417-11	CARBON	1K	5%	1/4W	
R1724	⚠1-215-886-91	METAL OXIDE	100	5%	2W	F
R1725	⚠1-215-886-91	METAL OXIDE	100	5%	2W	F
R1726	⚠1-215-886-91	METAL OXIDE	100	5%	2W	F
R1727	1-214-792-00	METAL	1	1%	1/2W	
R1728	1-214-792-00	METAL	1	1%	1/2W	
R1729	1-214-792-00	METAL	1	1%	1/2W	
R1730	1-249-405-11	CARBON	100	5%	1/4W	
R1731	1-249-417-11	CARBON	1K	5%	1/4W	
R1732	1-249-405-11	CARBON	100	5%	1/4W	
R1733	1-249-405-11	CARBON	100	5%	1/4W	
R1734	1-249-405-11	CARBON	100	5%	1/4W	
R1735	1-249-405-11	CARBON	100	5%	1/4W	
R1736	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1737	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1738	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1739	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1740	1-249-417-11	CARBON	1K	5%	1/4W	
R1741	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1742	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1743	1-249-417-11	CARBON	1K	5%	1/4W	
R1744	1-249-411-11	CARBON	330	5%	1/4W	
R1745	1-249-405-11	CARBON	100	5%	1/4W	
R1746	1-214-792-00	METAL	1	1%	1/2W	
R1747	⚠1-215-886-91	METAL OXIDE	100	5%	2W	F
R1748	1-215-421-00	METAL	1K	1%	1/4W	
R1749	1-215-421-00	METAL	1K	1%	1/4W	
R1750	1-215-421-00	METAL	1K	1%	1/4W	
R1751	1-215-421-00	METAL	1K	1%	1/4W	
R1752	1-215-421-00	METAL	1K	1%	1/4W	
R1753	1-215-421-00	METAL	1K	1%	1/4W	
R1754	1-214-792-00	METAL	1	1%	1/2W	
R1755	1-215-469-00	METAL	100K	1%	1/4W	
R1756	1-215-437-00	METAL	4.7K	1%	1/4W	
R1757	1-215-437-00	METAL	4.7K	1%	1/4W	
R1758	1-215-437-00	METAL	4.7K	1%	1/4W	
R1759	1-249-405-11	CARBON	100	5%	1/4W	
R1760	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1761	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1762	1-215-445-00	METAL	10K	1%	1/4W	
R1763	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1764	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1765	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1766	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1767	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1768	1-249-439-11	CARBON	68K	5%	1/4W	
R1769	1-215-445-00	METAL	10K	1%	1/4W	
R1770	1-249-405-11	CARBON	100	5%	1/4W	
R1771	1-249-405-11	CARBON	100	5%	1/4W	
R1772	1-215-429-00	METAL	2.2K	1%	1/4W	
R1773	1-215-429-00	METAL	2.2K	1%	1/4W	
R1774	1-215-421-00	METAL	1K	1%	1/4W	
R1775	1-249-429-11	CARBON	10K	5%	1/4W	
R1776	1-215-421-00	METAL	1K	1%	1/4W	
R1777	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1778	1-215-421-00	METAL	1K	1%	1/4W	
R1779	⚠1-215-898-91	METAL OXIDE	10K	5%	2W	F
R1780	1-214-804-11	METAL	3.3	1%	1/2W	
R1781	1-214-804-11	METAL	3.3	1%	1/2W	
R1782	⚠1-215-898-91	METAL OXIDE	10K	5%	2W	F
R1783	1-214-804-11	METAL	3.3	1%	1/2W	
R1784	1-214-804-11	METAL	3.3	1%	1/2W	
R1785	⚠1-215-898-91	METAL OXIDE	10K	5%	2W	F
R1786	1-214-804-11	METAL	3.3	1%	1/2W	
R1787	1-214-804-11	METAL	3.3	1%	1/2W	
R1788	1-249-433-11	CARBON	22K	5%	1/4W	
R1789	1-249-441-11	CARBON	100K	5%	1/4W	
R1790	1-249-433-11	CARBON	22K	5%	1/4W	
R1791	1-249-429-11	CARBON	10K	5%	1/4W	
R1792	1-215-445-00	METAL	10K	1%	1/4W	
R1793	1-249-405-11	CARBON	100	5%	1/4W	
R1794	1-215-429-00	METAL	2.2K	1%	1/4W	
R1795	1-249-433-11	CARBON	22K	5%	1/4W	
R1796	1-249-405-11	CARBON	100	5%	1/4W	
R1797	1-249-429-11	CARBON	10K	5%	1/4W	
R1798	1-249-423-11	CARBON	3.3K	5%	1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R1800	1-249-405-11	CARBON	100	5%	1/4W	
R1801	1-215-439-00	METAL	5.6K	1%	1/4W	
R1802	1-215-439-00	METAL	5.6K	1%	1/4W	
R1803	1-215-439-00	METAL	5.6K	1%	1/4W	
R1805	1-215-439-00	METAL	5.6K	1%	1/4W	
R1806	1-249-405-11	CARBON	100	5%	1/4W	
R1807	1-249-405-11	CARBON	100	5%	1/4W	
R1808	1-214-792-00	METAL	1	1%	1/2W	
R1809	1-214-792-00	METAL	1	1%	1/2W	
R1810	1-214-792-00	METAL	1	1%	1/2W	
R1811	1-214-792-00	METAL	1	1%	1/2W	
R1812	1-214-792-00	METAL	1	1%	1/2W	
R1813	1-214-792-00	METAL	1	1%	1/2W	
R1814	1-249-431-11	CARBON	15K	5%	1/4W	
R1815	1-247-885-00	CARBON	180K	5%	1/4W	
R1816	1-249-431-11	CARBON	15K	5%	1/4W	
R1817	1-247-885-00	CARBON	180K	5%	1/4W	
R1818	1-249-405-11	CARBON	100	5%	1/4W	
R1819	1-215-437-00	METAL	4.7K	1%	1/4W	
R1820	1-215-437-00	METAL	4.7K	1%	1/4W	
R1821	1-215-437-00	METAL	4.7K	1%	1/4W	
R1822	1-215-445-00	METAL	10K	1%	1/4W	
R1823	1-215-445-00	METAL	10K	1%	1/4W	
R1824	1-215-433-00	METAL	3.3K	1%	1/4W	
R1825	1-215-433-00	METAL	3.3K	1%	1/4W	
R1826	1-215-433-00	METAL	3.3K	1%	1/4W	
R1827	1-215-445-00	METAL	10K	1%	1/4W	
R1828	1-215-445-00	METAL	10K	1%	1/4W	
R1829	1-249-434-11	CARBON	27K	5%	1/4W	
R1830	1-249-434-11	CARBON	27K	5%	1/4W	
R1831	1-249-405-11	CARBON	100	5%	1/4W	
R1832	1-215-471-00	METAL	120K	1%	1/4W	
R1833	1-215-471-00	METAL	120K	1%	1/4W	
R1834	1-215-471-00	METAL	120K	1%	1/4W	
R1835	1-215-437-00	METAL	4.7K	1%	1/4W	
R1836	1-215-437-00	METAL	4.7K	1%	1/4W	
R1837	1-215-421-00	METAL	1K	1%	1/4W	
R1838	1-249-431-11	CARBON	15K	5%	1/4W	
R1839	1-249-431-11	CARBON	15K	5%	1/4W	
R1858	1-215-445-00	METAL	10K	1%	1/4W	
R1859	1-215-445-00	METAL	10K	1%	1/4W	
R1860	1-215-397-00	METAL	100	1%	1/4W	
R1861	1-215-453-00	METAL	22K	1%	1/4W	
R1862	1-215-453-00	METAL	22K	1%	1/4W	
R1863	1-215-397-00	METAL	100	1%	1/4W	
R1864	1-215-437-00	METAL	4.7K	1%	1/4W	
R1865	1-215-453-00	METAL	22K	1%	1/4W	
R1866	1-215-453-00	METAL	22K	1%	1/4W	
R1867	1-215-437-00	METAL	4.7K	1%	1/4W	
R1868	1-215-439-00	METAL	5.6K	1%	1/4W	
R1869	1-215-445-00	METAL	10K	1%	1/4W	
R1870	1-215-445-00	METAL	10K	1%	1/4W	
R1871	1-215-445-00	METAL	10K	1%	1/4W	
R1872	1-215-437-00	METAL	4.7K	1%	1/4W	
R1873	1-215-437-00	METAL	4.7K	1%	1/4W	
R1874	1-215-437-00	METAL	4.7K	1%	1/4W	
R1875	1-215-437-00	METAL	4.7K	1%	1/4W	
R1876	1-215-437-00	METAL	4.7K	1%	1/4W	
R1877	1-215-437-00	METAL	4.7K	1%	1/4W	
R1878	1-215-475-00	METAL	180K	1%	1/4W	
R1879	1-215-475-00	METAL	180K	1%	1/4W	
R1880	1-215-475-00	METAL	180K	1%	1/4W	
R1881	1-215-461-00	METAL	47K	1%	1/4W	
R1882	1-215-445-00	METAL	10K	1%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1883	1-215-453-00	METAL	22K	1%	1/4W	
R1884	1-215-397-00	METAL	100	1%	1/4W	
R1885	1-215-445-00	METAL	10K	1%	1/4W	
R1886	1-215-445-00	METAL	10K	1%	1/4W	
R1887	1-215-397-00	METAL	100	1%	1/4W	
R1888	1-215-461-00	METAL	47K	1%	1/4W	
R1889	1-215-457-00	METAL	33K	1%	1/4W	
R1890	1-215-457-00	METAL	33K	1%	1/4W	
R1891	1-215-443-00	METAL	8.2K	1%	1/4W	
R1892	1-215-445-00	METAL	10K	1%	1/4W	
R1894	1-215-429-00	METAL	2.2K	1%	1/4W	
R1895	1-215-445-00	METAL	10K	1%	1/4W	
R1896	1-215-445-00	METAL	10K	1%	1/4W	
R1897	1-215-449-00	METAL	15K	1%	1/4W	
R1898	1-215-445-00	METAL	10K	1%	1/4W	
R1899	1-215-421-00	METAL	1K	1%	1/4W	
R1900	1-215-429-00	METAL	2.2K	1%	1/4W	
R1901	1-215-449-00	METAL	15K	1%	1/4W	
R1902	1-215-445-00	METAL	10K	1%	1/4W	
R1903	1-215-445-00	METAL	10K	1%	1/4W	
R1904	1-215-445-00	METAL	10K	1%	1/4W	
R1905	1-215-445-00	METAL	10K	1%	1/4W	
R1906	1-215-429-00	METAL	2.2K	1%	1/4W	
R1907	1-215-445-00	METAL	10K	1%	1/4W	
R1908	1-215-445-00	METAL	10K	1%	1/4W	
R1909	1-215-445-00	METAL	10K	1%	1/4W	
R1910	1-215-445-00	METAL	10K	1%	1/4W	
R1911	1-215-453-00	METAL	22K	1%	1/4W	
R1916	1-215-423-00	METAL	1.2K	1%	1/4W	
R1920	1-215-453-00	METAL	22K	1%	1/4W	
R1921	1-215-445-00	METAL	10K	1%	1/4W	
R1922	1-215-445-00	METAL	10K	1%	1/4W	
R1924	1-215-429-00	METAL	2.2K	1%	1/4W	
R1925	1-215-429-00	METAL	2.2K	1%	1/4W	
R1926	1-215-429-00	METAL	2.2K	1%	1/4W	
R1927	1-215-445-00	METAL	10K	1%	1/4W	
R1928	1-215-421-00	METAL	1K	1%	1/4W	
R1929	1-215-445-00	METAL	10K	1%	1/4W	
R1930	1-215-397-00	METAL	100	1%	1/4W	
R1931	1-215-397-00	METAL	100	1%	1/4W	
R1932	1-215-453-00	METAL	22K	1%	1/4W	
R1933	1-215-453-00	METAL	22K	1%	1/4W	
R1934	1-215-429-00	METAL	2.2K	1%	1/4W	
R1937	1-215-445-00	METAL	10K	1%	1/4W	

<VARIABLE RESISTOR>

RV901	1-241-631-11	RES, ADJ, CARBON	22K
RV902	1-241-631-11	RES, ADJ, CARBON	22K
RV903	1-241-631-11	RES, ADJ, CARBON	22K
RV904	1-241-631-11	RES, ADJ, CARBON	22K
RV905	1-241-631-11	RES, ADJ, CARBON	22K
RV906	1-241-631-11	RES, ADJ, CARBON	22K
RV907	1-241-631-11	RES, ADJ, CARBON	22K
RV908	1-241-631-11	RES, ADJ, CARBON	22K
RV909	1-241-631-11	RES, ADJ, CARBON	22K
RV910	1-241-631-11	RES, ADJ, CARBON	22K
RV911	1-241-627-11	RES, ADJ, CARBON	1K
RV912	1-241-631-11	RES, ADJ, CARBON	22K
RV913	1-238-023-11	RES, ADJ, CARBON	470K
RV914	1-241-630-11	RES, ADJ, CARBON	10K
RV915	1-241-630-11	RES, ADJ, CARBON	10K
RV916	1-241-631-11	RES, ADJ, CARBON	22K

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REF.NO.	PART NO.	DESCRIPTION	REMARK
RV917	1-241-631-11	RES, ADJ, CARBON 22K	
RV918	1-241-631-11	RES, ADJ, CARBON 22K	
RV919	1-241-631-11	RES, ADJ, CARBON 22K	
RV920	1-241-631-11	RES, ADJ, CARBON 22K	
RV921	1-241-631-11	RES, ADJ, CARBON 22K	
RV922	1-241-631-11	RES, ADJ, CARBON 22K	
RV923	1-241-631-11	RES, ADJ, CARBON 22K	
RV924	1-241-631-11	RES, ADJ, CARBON 22K	
RV925	1-241-631-11	RES, ADJ, CARBON 22K	
RV926	1-241-631-11	RES, ADJ, CARBON 22K	
RV927	1-241-631-11	RES, ADJ, CARBON 22K	
RV928	1-241-630-11	RES, ADJ, CARBON 10K	
RV929	1-241-631-11	RES, ADJ, CARBON 22K	
RV930	1-241-630-11	RES, ADJ, CARBON 10K	
RV931	1-241-631-11	RES, ADJ, CARBON 22K	
RV932	1-241-631-11	RES, ADJ, CARBON 22K	
RV933	1-241-631-11	RES, ADJ, CARBON 22K	
RV934	1-241-631-11	RES, ADJ, CARBON 22K	
RV935	1-241-631-11	RES, ADJ, CARBON 22K	
RV936	1-241-631-11	RES, ADJ, CARBON 22K	
RV937	1-241-630-11	RES, ADJ, CARBON 10K	
RV938	1-241-630-11	RES, ADJ, CARBON 10K	
RV939	1-241-630-11	RES, ADJ, CARBON 10K	
RV940	1-241-631-11	RES, ADJ, CARBON 22K	
RV941	1-241-631-11	RES, ADJ, CARBON 22K	
RV942	1-241-631-11	RES, ADJ, CARBON 22K	
RV943	1-241-631-11	RES, ADJ, CARBON 22K	
RV944	1-241-631-11	RES, ADJ, CARBON 22K	
RV945	1-241-631-11	RES, ADJ, CARBON 22K	
RV946	1-241-631-11	RES, ADJ, CARBON 22K	
RV947	1-241-631-11	RES, ADJ, CARBON 22K	
RV948	1-241-631-11	RES, ADJ, CARBON 22K	
RV949	1-241-631-11	RES, ADJ, CARBON 22K	
RV950	1-241-631-11	RES, ADJ, CARBON 22K	
RV951	1-241-631-11	RES, ADJ, CARBON 22K	
RV952	1-241-631-11	RES, ADJ, CARBON 22K	
RV953	1-241-631-11	RES, ADJ, CARBON 22K	
RV954	1-241-631-11	RES, ADJ, CARBON 22K	
RV956	1-241-631-11	RES, ADJ, CARBON 22K	
RV957	1-241-631-11	RES, ADJ, CARBON 22K	
RV958	1-241-631-11	RES, ADJ, CARBON 22K	
RV959	1-241-631-11	RES, ADJ, CARBON 22K	
RV960	1-241-630-11	RES, ADJ, CARBON 10K	
RV961	1-241-631-11	RES, ADJ, CARBON 22K	
RV962	1-241-631-11	RES, ADJ, CARBON 22K	
RV963	1-241-631-11	RES, ADJ, CARBON 22K	
RV964	1-241-631-11	RES, ADJ, CARBON 22K	
RV965	1-241-631-11	RES, ADJ, CARBON 22K	
RV966	1-241-631-11	RES, ADJ, CARBON 22K	
RV967	1-241-631-11	RES, ADJ, CARBON 22K	
RV968	1-241-631-11	RES, ADJ, CARBON 22K	
RV969	1-241-631-11	RES, ADJ, CARBON 22K	
RV970	1-241-631-11	RES, ADJ, CARBON 22K	
RV971	1-241-631-11	RES, ADJ, CARBON 22K	
RV972	1-241-631-11	RES, ADJ, CARBON 22K	
RV973	1-241-631-11	RES, ADJ, CARBON 22K	
RV974	1-241-631-11	RES, ADJ, CARBON 22K	
RV975	1-241-631-11	RES, ADJ, CARBON 22K	
RV976	1-241-631-11	RES, ADJ, CARBON 22K	
RV977	1-241-631-11	RES, ADJ, CARBON 22K	
RV978	1-241-631-11	RES, ADJ, CARBON 22K	
RV979	1-241-631-11	RES, ADJ, CARBON 22K	
RV980	1-238-019-11	RES, ADJ, CARBON 47K	
RV981	1-241-631-11	RES, ADJ, CARBON 22K	
RV982	1-241-631-11	RES, ADJ, CARBON 22K	

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*1-644-278-11	DS BOARD		
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	<CAPACITOR>		
C1745	1-126-101-11	ELECT 100MF 20% 16V	
C1746	1-126-101-11	ELECT 100MF 20% 16V	
C1747	1-126-101-11	ELECT 100MF 20% 16V	
C1748	1-126-101-11	ELECT 100MF 20% 16V	
C1750	1-124-916-11	ELECT 22MF 20% 25V	
C1751	1-126-101-11	ELECT 100MF 20% 16V	
C1752	1-124-916-11	ELECT 22MF 20% 25V	
C1753	1-124-916-11	ELECT 22MF 20% 25V	
C1851	1-102-074-00	CERAMIC 0.001MF 10% 50V	
	<CONNECTOR>		
DS6	1-691-182-11	CONNECTOR (BOARD TO BOARD) 12P	
	<IC>		
IC1711	8-759-111-69	IC UPC1037HA	
IC1712	8-759-602-19	IC M5220L	
IC1713	8-759-111-69	IC UPC1037HA	
	<RESISTOR>		
R1840	1-215-445-00	METAL 10K 1% 1/4W	
R1841	1-215-433-00	METAL 3.3K 1% 1/4W	
R1842	1-215-465-00	METAL 68K 1% 1/4W	
R1843	1-215-421-00	METAL 1K 1% 1/4W	
R1844	1-215-455-00	METAL 27K 1% 1/4W	
R1845	1-215-455-00	METAL 27K 1% 1/4W	
R1846	1-215-421-00	METAL 1K 1% 1/4W	
R1850	1-215-461-00	METAL 47K 1% 1/4W	
R1851	1-215-461-00	METAL 47K 1% 1/4W	
R1852	1-215-429-00	METAL 2.2K 1% 1/4W	
R1853	1-215-397-00	METAL 100 1% 1/4W	
R1854	1-215-429-00	METAL 2.2K 1% 1/4W	
R1855	1-215-397-00	METAL 100 1% 1/4W	
R1940	1-215-445-00	METAL 10K 1% 1/4W	
R1941	1-215-433-00	METAL 3.3K 1% 1/4W	
R1942	1-215-421-00	METAL 1K 1% 1/4W	
R1943	1-215-465-00	METAL 68K 1% 1/4W	
R1944	1-215-421-00	METAL 1K 1% 1/4W	
R1945	1-215-455-00	METAL 27K 1% 1/4W	
R1946	1-215-455-00	METAL 27K 1% 1/4W	
	<VARIABLE RESISTOR>		
RV983	1-241-630-11	RES, ADJ, CARBON 10K	
RV984	1-241-630-11	RES, ADJ, CARBON 10K	

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*1-643-591-11	H1 BOARD	
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4-033-777-01	HOLDER, LED	
*4-374-987-01	GUIDE, LIGHT	
4-381-686-01	BRACKET (B), LIGHT GUIDE	

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

H1 **H2** **YA**

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<CAPACITOR>			
C1601	1-124-907-11	ELECT	10MF	20% 50V	
C1602	1-124-907-11	ELECT	10MF	20% 50V	
C1603	1-124-907-11	ELECT	10MF	20% 50V	
C1604	1-124-261-00	ELECT	10MF	20% 50V	
		<DIODE>			
D1601	8-719-812-41	DIODE TLR124			
D1602	8-719-812-41	DIODE TLR124			
		<CONNECTOR>			
H11	*1-564-526-11	PLUG, CONNECTOR 11P			
H15	*1-564-517-11	PLUG, CONNECTOR 2P			
		<IC>			
IC1601	8-741-148-33	IC SBX1483-59			
		<RESISTOR>			
R1601	1-249-430-11	CARBON	12K	5% 1/4W	
R1602	1-249-425-11	CARBON	4.7K	5% 1/4W	
R1603	1-249-421-11	CARBON	2.2K	5% 1/4W	
R1604	1-249-419-11	CARBON	1.5K	5% 1/4W	
R1606	1-249-405-11	CARBON	100	5% 1/4W	
R1607	1-249-405-11	CARBON	100	5% 1/4W	
R1608	1-249-411-11	CARBON	330	5% 1/4W	
R1609	1-249-411-11	CARBON	330	5% 1/4W	
		<SWITCH>			
S1601	1-554-303-21	SWITCH, TACTIL			
S1602	1-554-303-21	SWITCH, TACTIL			
S1603	1-554-303-21	SWITCH, TACTIL			
S1604	1-554-303-21	SWITCH, TACTIL			
S1605	1-554-303-21	SWITCH, TACTIL			
S1606⚠	1-571-731-21	SWITCH, TACTIL			
**********					
	*1-643-592-11	H2 BOARD			
		********			
		<CAPACITOR>			
C1651	1-124-477-11	ELECT	47MF	20% 16V	
C1655	1-124-927-11	ELECT	4.7MF	20% 50V	
		<DIODE>			
D1651	8-719-908-03	DIODE GP08D			
D1652	8-719-908-03	DIODE GP08D			
D1653	8-719-108-12	DIODE RD9.1EW			
D1654	8-719-108-12	DIODE RD9.1EW			
D1655	8-719-108-12	DIODE RD9.1EW			
D1659	8-719-911-19	DIODE 1SS119			
D1660	8-719-110-88	DIODE RD39ESB2			
D1661	8-719-110-88	DIODE RD39ESB2			
D1662	8-719-110-88	DIODE RD39ESB2			
D1663	8-719-110-88	DIODE RD39ESB2			
		<CONNECTOR>			
H20	*1-564-517-11	PLUG, CONNECTOR 2P			
H21	*1-564-517-11	PLUG, CONNECTOR 2P			
H22	*1-564-519-11	PLUG, CONNECTOR 4P			
H25	*1-564-517-11	PLUG, CONNECTOR 2P			
H26	*1-564-519-11	PLUG, CONNECTOR 4P			
H28	*1-564-518-11	PLUG, CONNECTOR 3P			
H211	*1-564-517-11	PLUG, CONNECTOR 2P			
H216	*1-564-525-11	PLUG, CONNECTOR 10P			
H225	*1-564-518-11	PLUG, CONNECTOR 3P			
		<JACK>			
J1651	1-695-817-11	JACK BLOCK, PIN 3P			
		<JUMPER>			
JW54	1-123-549-00	ELECT	6.8MF	20% 50V	
JW55	1-123-549-00	ELECT	6.8MF	20% 50V	
		<TRANSISTOR>			
Q1651	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1652	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1653	8-729-119-78	TRANSISTOR 2SC2785-HFE			
		<RESISTOR>			
R1651	1-249-419-11	CARBON	1.5K	5% 1/4W	
R1652	1-249-421-11	CARBON	2.2K	5% 1/4W	
R1653	1-249-425-11	CARBON	4.7K	5% 1/4W	
R1654	1-249-430-11	CARBON	12K	5% 1/4W	
R1655	1-249-417-11	CARBON	1K	5% 1/4W	
R1656	1-249-417-11	CARBON	1K	5% 1/4W	
R1657	1-249-436-11	CARBON	39K	5% 1/4W	
R1658	1-249-437-11	CARBON	47K	5% 1/4W	
R1659	1-249-437-11	CARBON	47K	5% 1/4W	
		<RELAY>			
RY1651	1-515-586-11	RELAY (DS-2)			
RY1652	1-515-586-11	RELAY (DS-2)			
		<SWITCH>			
S1651	1-554-303-21	SWITCH, TACTIL			
S1652	1-554-303-21	SWITCH, TACTIL			
S1653	1-554-303-21	SWITCH, TACTIL			
S1654	1-554-303-21	SWITCH, TACTIL			
S1655	1-554-303-21	SWITCH, TACTIL			
**********					
	*1-644-632-11	YA BOARD			
		********			
		<CAPACITOR>			
C7001	1-124-902-00	ELECT	0.47MF	20% 50V	
C7002	1-102-824-00	CERAMIC	470PF	5% 50V	
C7003	1-124-910-11	ELECT	47MF	20% 50V	
C7005	1-124-618-11	ELECT	2200MF	20% 35V	
C7006	1-137-399-11	FILM	0.1MF	5% 100V	
C7007	1-124-910-11	ELECT	47MF	20% 50V	
C7008	1-124-910-11	ELECT	47MF	20% 50V	
C7009	1-137-399-11	FILM	0.1MF	5% 100V	

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YA YG ZR

REF.NO.	PART NO.	DESCRIPTION				REMARK
C7010	1-124-618-11	ELECT	2200MF	20%	35V	
C7012	1-124-910-11	ELECT	47MF	20%	50V	
C7013	1-124-902-00	ELECT	0.47MF	20%	50V	
C7014	1-102-824-00	CERAMIC	470PF	5%	50V	
C7015	1-124-917-11	ELECT	33MF	20%	50V	
C7016	1-124-572-11	ELECT	100MF	20%	63V	
C7017	1-124-921-11	ELECT	470MF	20%	63V	
C7020	1-124-903-11	ELECT	1MF	20%	50V	
C7021	1-124-903-11	ELECT	1MF	20%	50V	
C7041	1-124-484-11	ELECT	220MF	20%	35V	
C7042	1-124-484-11	ELECT	220MF	20%	35V	
		<DIODE>				
D7041	8-719-946-29	DIODE 1SS198TA				
D7042	8-719-946-29	DIODE 1SS198TA				
		<IC>				
IC7001	8-749-920-14	IC STK4412				
		<TRANSISTOR>				
Q7001	8-729-141-26	TRANSISTOR 2SC3622A-LK				
Q7002	8-729-141-26	TRANSISTOR 2SC3622A-LK				
Q7041	8-729-141-26	TRANSISTOR 2SC3622A-LK				
		<RESISTOR>				
R7001	1-249-433-11	CARBON	22K	5%	1/4W	
R7002	1-249-433-11	CARBON	22K	5%	1/4W	
R7003	1-249-441-11	CARBON	100K	5%	1/4W	
R7006	1-249-430-11	CARBON	12K	5%	1/4W	
R7007	1-249-411-11	CARBON	330	5%	1/4W	
R7008	⚠1-215-888-71	METAL OXIDE	220	5%	2W	F
R7009	1-249-389-11	CARBON	4.7	5%	1/4W	F
R7010	1-249-389-11	CARBON	4.7	5%	1/4W	F
R7011	⚠1-215-888-71	METAL OXIDE	220	5%	2W	F
R7012	1-249-430-11	CARBON	12K	5%	1/4W	
R7014	1-249-411-11	CARBON	330	5%	1/4W	
R7016	1-249-441-11	CARBON	100K	5%	1/4W	
R7017	1-249-441-11	CARBON	100K	5%	1/4W	
R7018	1-247-889-00	CARBON	270K	5%	1/4W	
R7019	1-249-405-11	CARBON	100	5%	1/4W	F
R7023	1-215-445-00	METAL	10K	1%	1/4W	
R7024	1-215-445-00	METAL	10K	1%	1/4W	
R7030	1-215-439-00	METAL	5.6K	1%	1/4W	
R7031	1-215-439-00	METAL	5.6K	1%	1/4W	
R7041	1-247-895-00	CARBON	470K	5%	1/4W	
R7042	1-247-895-00	CARBON	470K	5%	1/4W	
R7043	1-247-893-11	CARBON	390K	5%	1/4W	
R7044	1-249-437-11	CARBON	47K	5%	1/4W	
R7100	⚠1-217-286-11	WIREWOUND	1	10%	5W	F
R7101	⚠1-217-288-11	WIREWOUND	1.5	10%	5W	F
R7102	⚠1-217-288-11	WIREWOUND	1.5	10%	5W	F
		<CONNECTOR>				
YA2	*1-564-507-11	PLUG, CONNECTOR 4P				
YA7	*1-564-505-11	PLUG, CONNECTOR 2P				
YA8	*1-564-506-11	PLUG, CONNECTOR 3P				
YA28	*1-564-508-11	PLUG, CONNECTOR 5P				

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REF.NO.	PART NO.	DESCRIPTION				REMARK
	*1-644-633-11	YG BOARD				
		********				
	1-533-189-11	HOLDER, FUSE				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
		<CAPACITOR>				
C7201	1-125-463-11	ELECT(BLOCK)	2200MF	20%	63V	
C7202	1-124-607-11	ELECT	2200MF	20%	50V	
C7203	1-101-821-00	CERAMIC	0.0022MF		500V	
C7204	1-101-821-00	CERAMIC	0.0022MF		500V	
C7205	1-101-821-00	CERAMIC	0.0022MF		500V	
C7206	1-101-821-00	CERAMIC	0.0022MF		500V	
		<DIODE>				
D7201	8-719-110-30	DIODE RD12ESB1				
D7202	⚠8-719-312-09	DIODE RBA-402				
D7203	⚠8-719-312-09	DIODE RBA-402				
		<FUSE>				
F7201	⚠1-532-746-11	FUSE, GLASS TUBE (4A/125V)				
F7202	⚠1-532-746-11	FUSE, GLASS TUBE (4A/125V)				
		<RESISTOR>				
R7201	1-249-406-11	CARBON	120	5%	1/4W	F
R7202	⚠1-215-879-71	METAL OXIDE	47K	5%	1W	F
R7203	⚠1-215-879-71	METAL OXIDE	47K	5%	1W	F
		<RELAY>				
RY7201	⚠1-515-684-12	RELAY				
		<CONNECTOR>				
YG1	*1-691-134-11	PIN, CONNECTOR (PC BOARD) 2P				
YG2	*1-564-507-11	PLUG, CONNECTOR 4P				
YG3	*1-564-507-11	PLUG, CONNECTOR 4P				
YG5	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P				
YG9	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P				
YG12	*1-564-505-11	PLUG, CONNECTOR 2P				

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	*A-1390-340-A	ZR BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C1901	1-162-115-00	CERAMIC	330PF	10%	2KV	
C1902	1-162-115-00	CERAMIC	330PF	10%	2KV	
		<RESISTOR>				
R1901	1-202-818-00	SOLID	1K	20%	1/2W	
R1902	1-202-818-00	SOLID	1K	20%	1/2W	
R1903	1-249-414-11	CARBON	560	5%	1/4W	
R1904	1-249-414-11	CARBON	560	5%	1/4W	
		<CONNECTOR>				

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ZR **ZG** **ZB** **N**

REF.NO.	PART NO.	DESCRIPTION				REMARK
ZR1	*1-564-522-11	PLUG, CONNECTOR 7P				
ZR2	*1-564-518-11	PLUG, CONNECTOR 3P				
ZR18	*1-691-292-11	PIN, CONNECTOR (PC BOARD) 3P				
**********						
	*A-1390-346-A	ZG BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C1911	1-162-115-00	CERAMIC	330PF	10%	2KV	
C1912	1-162-115-00	CERAMIC	330PF	10%	2KV	
		<RESISTOR>				
R1911	1-202-818-00	SOLID	1K	20%	1/2W	
R1912	1-202-818-00	SOLID	1K	20%	1/2W	
R1913	1-249-414-11	CARBON	560	5%	1/4W	
R1914	1-249-414-11	CARBON	560	5%	1/4W	
		<CONNECTOR>				
ZG2	*1-564-523-11	PLUG, CONNECTOR 8P				
ZG19	*1-691-292-11	PIN, CONNECTOR (PC BOARD) 3P				
**********						
	*A-1390-347-A	ZB BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C1921	1-162-115-00	CERAMIC	330PF	10%	2KV	
C1922	1-162-115-00	CERAMIC	330PF	10%	2KV	
		<RESISTOR>				
R1921	1-202-818-00	SOLID	1K	20%	1/2W	
R1922	1-202-818-00	SOLID	1K	20%	1/2W	
R1923	1-249-414-11	CARBON	560	5%	1/4W	
R1924	1-249-414-11	CARBON	560	5%	1/4W	
		<CONNECTOR>				
ZB3	*1-564-524-11	PLUG, CONNECTOR 9P				
ZB20	*1-691-292-11	PIN, CONNECTOR (PC BOARD) 3P				
**********						
	*A-1390-351-A	N BOARD, COMPLETE				
		**********				
	1-202-826-00	SOLID	4.7K	10%	1/2W	
	4-039-042-01	SPACER, INSULATING				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
	4-383-023-01	SPACER, MICA				
		<CAPACITOR>				
C801	1-125-489-00	ELECT(BLOCK)	560MF	20%	200V	
C802	1-123-024-21	ELECT	33MF		160V	
C803	1-136-729-11	FILM	1.5MF	5%	400V	
C804	1-106-383-00	MYLAR	0.047MF		200V	
C805	1-102-030-00	CERAMIC	330PF	10%	500V	
C806	1-130-495-00	MYLAR	0.1MF	5%	50V	
C807	1-123-875-11	ELECT	10MF	20%	50V	
C808	1-126-183-11	ELECT	1000MF	20%	16V	
C809	1-124-903-11	ELECT	1MF	20%	50V	
C810	1-124-903-11	ELECT	1MF	20%	50V	
C811	1-124-902-00	ELECT	0.47MF	20%	50V	
C812	1-102-973-00	CERAMIC	100PF	5%	50V	
C813	1-102-244-00	CERAMIC	220PF	10%	500V	
C814	1-106-391-12	MYLAR	0.1MF	10%	200V	
C815	1-106-367-00	MYLAR	0.01MF	10%	200V	
C816	1-124-907-11	ELECT	10MF	20%	50V	
C817	1-124-119-00	ELECT	330MF	20%	16V	
C818	1-102-824-00	CERAMIC	470PF	5%	50V	
C819	1-124-907-11	ELECT	10MF	20%	50V	
C820	1-124-907-11	ELECT	10MF	20%	50V	
C821	1-124-907-11	ELECT	10MF	20%	50V	
C822	1-124-034-51	ELECT	33MF	20%	16V	
C823	1-124-907-11	ELECT	10MF	20%	50V	
C824	1-124-034-51	ELECT	33MF	20%	16V	
C825	1-124-034-51	ELECT	33MF	20%	16V	
C826	1-124-907-11	ELECT	10MF	20%	50V	
C827	1-124-907-11	ELECT	10MF	20%	50V	
C828	1-124-907-11	ELECT	10MF	20%	50V	
C829	1-124-034-51	ELECT	33MF	20%	16V	
C830	1-124-907-11	ELECT	10MF	20%	50V	
C831	1-106-220-00	MYLAR	0.1MF	10%	100V	
C832	1-124-907-11	ELECT	10MF	20%	50V	
C833	1-124-916-11	ELECT	22MF	20%	50V	
C834	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C835	1-124-927-11	ELECT	4.7MF	20%	50V	
C836	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C837	1-136-169-00	FILM	0.22MF	5%	50V	
C838	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C839	1-102-106-00	CERAMIC	100PF	10%	50V	
C840 ⚠	1-136-807-11	FILM	0.018MF	3%	1.6KV	
C841	1-136-729-11	FILM	1.5MF	5%	400V	
C842	1-130-471-00	MYLAR	0.001MF	5%	50V	
C844	1-106-391-12	MYLAR	0.1MF	10%	200V	
C850	1-136-169-00	FILM	0.22MF	5%	50V	
C851	1-124-907-11	ELECT	10MF	20%	50V	
C852	1-124-907-11	ELECT	10MF	20%	50V	
C853	1-106-220-00	MYLAR	0.1MF	10%	100V	
C854	1-126-329-11	ELECT	470MF	20%	50V	
C855	1-124-514-11	ELECT	100MF	20%	50V	
C856	1-162-114-00	CERAMIC	0.0047MF		2KV	
C858	1-124-119-00	ELECT	330MF	20%	16V	
C888	1-124-903-11	ELECT	1MF	20%	50V	
		<DIODE>				
D801	8-719-928-08	DIODE ERD28-08S				
D802	8-719-300-80	DIODE RU-1C				
D803	8-719-109-85	DIODE RD5.1ESB2				
D804	8-719-911-19	DIODE 1SS119				
D805	8-719-911-19	DIODE 1SS119				
D806	8-719-109-85	DIODE RD5.1ESB2				
D807	8-719-109-85	DIODE RD5.1ESB2				
D808	8-719-911-19	DIODE 1SS119				
D809	8-719-911-19	DIODE 1SS119				
D810	8-719-911-19	DIODE 1SS119				
D811	8-719-109-85	DIODE RD5.1ESB2				
D812	8-719-911-19	DIODE 1SS119				
D813	8-719-911-19	DIODE 1SS119				
D814	8-719-911-19	DIODE 1SS119				
D815	8-719-110-36	DIODE RD13ESB22				
D817	8-719-945-80	DIODE ERC06-15S				

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D818	8-719-911-19	DIODE 1SS119	
D820	8-719-911-19	DIODE 1SS119	
D850	8-719-109-71	DIODE RD3.9ESB1	
D851 ⚠	8-719-903-09	DIODE V30N	
D852	8-719-911-19	DIODE 1SS119	
D853 ⚠	8-719-903-09	DIODE V30N	
D891	8-719-110-49	DIODE RD18ESB2	
D892	8-719-110-49	DIODE RD18ESB2	
		<IC>	
IC801	8-759-231-58	IC TA7812S	
IC802	8-759-103-93	IC UPC393C	
IC803	8-759-100-82	IC UPC4082C	
IC804	8-759-103-93	IC UPC393C	
IC805	8-759-100-75	IC UPC1394C	
		<COIL>	
L801	1-459-862-11	COIL, CHOKE 90UH	
L802	1-424-603-11	COIL, CHOKE 1.05MMH	
L803	1-459-313-00	COIL WITH CORE (HWC)	
L803	1-459-313-00	COIL WITH CORE (HWC)	
L804	1-410-482-31	INDUCTOR 100UH	
L805 ⚠	1-424-603-11	COIL, CHOKE 1.05MMH	
		<CONNECTOR>	
N-1	1-506-348-XX	PIN, CONNECTOR 3P	
N-2	*1-564-508-11	PLUG, CONNECTOR 5P	
N-3	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P	
N-4	*1-564-507-11	PLUG, CONNECTOR 4P	
N-5	*1-564-508-11	PLUG, CONNECTOR 5P	
N-6	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
N-7	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
N-8	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P	
N-9	1-506-348-XX	PIN, CONNECTOR 3P	
N-10	*1-564-511-11	PLUG, CONNECTOR 8P	
N-20	*1-560-126-00	PLUG, CONNECTOR (2.5MM) 6P	
N-21	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P	
N-30	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
N-851	*1-506-371-00	PIN, CONNECTOR 2P	
N-583	*1-506-371-00	PIN, CONNECTOR 2P	
		<NEON LAMP>	
NL801	1-519-108-XX	LAMP, NEON	
		<TRANSISTOR>	
Q801 ⚠	8-729-201-61	TRANSISTOR 2SC2555-1	
Q802	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q803	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q804	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q805	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q806	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q807	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q808	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q809	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q811 ⚠	8-729-805-07	TRANSISTOR 2SD1887-CA	
Q812	8-729-019-88	TRANSISTOR 2SC3675-CB	
Q820	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q851	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q852	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q853	8-729-820-98	TRANSISTOR 2SC4256CB	

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
R801 ⚠	1-216-378-91	METAL OXIDE	5.6	5%	2W	F
R802 ⚠	1-215-926-91	METAL OXIDE	33K	5%	3W	F
R803 ⚠	1-215-926-91	METAL OXIDE	33K	5%	3W	F
R804	1-249-429-11	CARBON	10K	5%	1/4W	
R805	1-249-423-11	CARBON	3.3K	5%	1/4W	
R806	1-249-425-11	CARBON	4.7K	5%	1/4W	
R807	1-249-441-11	CARBON	100K	5%	1/4W	
R808	1-249-417-11	CARBON	1K	5%	1/4W	
R809	1-249-417-11	CARBON	1K	5%	1/4W	
R810	1-249-441-11	CARBON	100K	5%	1/4W	
R811	1-249-421-11	CARBON	2.2K	5%	1/4W	
R812	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R813 ⚠	1-215-921-91	METAL OXIDE	4.7K	5%	3W	F
R814	1-249-409-11	CARBON	220	5%	1/4W	
R815	1-249-415-11	CARBON	680	5%	1/4W	
R816	1-214-777-00	METAL	100K	1%	1/4W	
R817	1-215-471-00	METAL	120K	1%	1/4W	
R818	1-215-471-00	METAL	120K	1%	1/4W	
R819	1-215-450-00	METAL	16K	1%	1/4W	
R820	1-215-451-00	METAL	18K	1%	1/4W	
R821	1-249-423-11	CARBON	3.3K	5%	1/4W	
R822	1-249-433-11	CARBON	22K	5%	1/4W	
R823	1-249-429-11	CARBON	10K	5%	1/4W	
R824	1-215-469-00	METAL	100K	1%	1/4W	
R825	1-215-453-00	METAL	22K	1%	1/4W	
R826	1-214-962-00	METAL	820K	1%	1/4W	
R827	1-214-764-00	METAL	30K	1%	1/4W	
R828	1-215-455-00	METAL	27K	1%	1/4W	
R829	1-215-455-00	METAL	27K	1%	1/4W	
R830 ⚠	1-215-928-91	METAL OXIDE	68K	5%	3W	F
R831 ⚠	1-215-928-91	METAL OXIDE	68K	5%	3W	F
R832	1-249-417-11	CARBON	1K	5%	1/4W	
R833	1-249-419-11	CARBON	1.5K	5%	1/4W	
R834	1-249-419-11	CARBON	1.5K	5%	1/4W	
R835	1-215-429-00	METAL	2.2K	1%	1/4W	
R836	1-215-435-00	METAL	3.9K	1%	1/4W	
R837	1-249-433-11	CARBON	22K	5%	1/4W	
R838	1-249-435-11	CARBON	33K	5%	1/4W	
R839	1-249-438-11	CARBON	56K	5%	1/4W	
R840	1-249-434-11	CARBON	27K	5%	1/4W	
R841	1-249-429-11	CARBON	10K	5%	1/4W	
R842	1-249-435-11	CARBON	33K	5%	1/4W	
R843	1-249-423-11	CARBON	3.3K	5%	1/4W	
R844	1-249-433-11	CARBON	22K	5%	1/4W	
R845	1-249-435-11	CARBON	33K	5%	1/4W	
R846	1-249-429-11	CARBON	10K	5%	1/4W	
R847	1-214-761-00	METAL	22K	1%	1/4W	
R848	1-215-429-00	METAL	2.2K	1%	1/4W	
R849	1-215-421-00	METAL	1K	1%	1/4W	
R850	1-215-429-00	METAL	2.2K	1%	1/4W	
R851	1-215-404-00	METAL	200	1%	1/4W	
⧓R852 ⚠		METAL			1/4W	
R853	1-215-469-00	METAL	100K	1%	1/4W	
R854	1-249-430-11	CARBON	12K	5%	1/4W	
R855	1-215-469-00	METAL	100K	1%	1/4W	
R856	1-249-430-11	CARBON	12K	5%	1/4W	
R857	1-249-433-11	CARBON	22K	5%	1/4W	
R858	1-249-413-11	CARBON	470	5%	1/4W	
R859	1-249-435-11	CARBON	33K	5%	1/4W	
R860	1-249-441-11	CARBON	100K	5%	1/4W	

• The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R861	1-249-421-11	CARBON	2.2K	5%	1/4W	
R862	1-249-434-11	CARBON	27K	5%	1/4W	
R863	1-249-431-11	CARBON	15K	5%	1/4W	
R864	1-249-423-11	CARBON	3.3K	5%	1/4W	
R865	1-249-440-11	CARBON	82K	5%	1/4W	
R866	1-249-436-11	CARBON	39K	5%	1/4W	
R867	1-249-437-11	CARBON	47K	5%	1/4W	
R868	1-249-428-11	CARBON	8.2K	5%	1/4W	
R869	1-249-429-11	CARBON	10K	5%	1/4W	
R870	1-249-417-11	CARBON	1K	5%	1/4W	
R871	1-249-440-11	CARBON	82K	5%	1/4W	
R872	1-249-423-11	CARBON	3.3K	5%	1/4W	
R873	1-249-441-11	CARBON	100K	5%	1/4W	
R874	1-249-435-11	CARBON	33K	5%	1/4W	
R875	1-249-421-11	CARBON	2.2K	5%	1/4W	
R876	1-215-426-00	METAL	1.6K	1%	1/4W	
R877	1-249-435-11	CARBON	33K	5%	1/4W	
R878	1-249-441-11	CARBON	100K	5%	1/4W	
R879	⚠1-216-489-91	METAL OXIDE	27K	5%	3W	F
R880	1-249-429-11	CARBON	10K	5%	1/4W	
R881	1-214-761-00	METAL	22K	1%	1/4W	
R882	1-249-433-11	CARBON	22K	5%	1/4W	
R883	1-249-417-11	CARBON	1K	5%	1/4W	
R884	⚠1-215-894-91	METAL OXIDE	2.2K	5%	2W	F
R885	1-249-438-11	CARBON	56K	5%	1/4W	
R886	1-249-414-11	CARBON	560	5%	1/4W	
R887	1-215-397-00	METAL	100	1%	1/4W	
R888	1-249-410-11	CARBON	270	5%	1/4W	
R889	1-249-417-11	CARBON	1K	5%	1/4W	
R890	1-249-417-11	CARBON	1K	5%	1/4W	
R891	⚠1-216-489-91	METAL OXIDE	27K	5%	3W	F
R892	1-249-417-11	CARBON	1K	5%	1/4W	F
R893	1-215-453-00	METAL	22K	1%	1/4W	
R894	1-249-401-11	CARBON	47	5%	1/4W	
R895	1-202-731-00	SOLID	10M	20%	1/2W	
R896	1-260-111-11	CARBON	10K	5%	1/2W	
R897	1-247-881-00	CARBON	120K	5%	1/4W	
R898	1-202-730-00	SOLID	8.2M	20%	1/2W	
R899	1-249-429-11	CARBON	10K	5%	1/4W	
R903	1-247-735-11	SOLID	47	20%	1/2W	
R904	⚠1-215-928-91	METAL OXIDE	68K	5%	3W	F
R905	⚠1-215-911-91	METAL OXIDE	100	5%	3W	F

<SPARK GAP>

SG801	1-519-422-11	GAP, SPARK	

<TRANSFORMER>

T801	⚠1-437-078-11	TRANSFORMER, HORIZONTAL DRIVE	
T802	1-437-090-00	HDT	
T803	⚠1-453-121-11	TRANSFORMER ASSY, FLYBACK (NX-2630B4)	

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	*A-1394-421-A	S BOARD, COMPLETE	
		**********	
	*1-565-514-11	SOCKET, CONNECTOR 2P	

<CAPACITOR>

C3403	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C3408	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C3409	1-124-477-11	ELECT	47MF	20%	16V
C3411	1-124-034-51	ELECT	33MF	20%	16V
C3442	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C3446	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C3447	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C3448	1-163-023-00	CERAMIC CHIP	0.015MF	10%	50V
C3449	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C3450	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C3451	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C3452	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C3453	1-124-477-11	ELECT	47MF	20%	16V
C3454	1-126-162-11	ELECT	3.3MF	20%	50V
C3455	1-126-163-11	ELECT	4.7MF	20%	16V
C3456	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C3457	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C3459	1-124-477-11	ELECT	47MF	20%	16V
C3460	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C3461	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C3507	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C3508	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C3509	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C3515	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C3540	1-126-157-11	ELECT	10MF	20%	16V

<DIODE>

D3444	8-719-404-46	DIODE MA110

<IC>

IC3401	8-759-403-44	IC MN1280-S
IC3402	8-759-070-42	IC M37201M6-A18FP
IC3441	8-759-982-21	IC RC78L05A
IC3442	8-759-084-12	IC LA7945
IC3443	8-759-158-03	IC LC7458A-02
IC3444	8-759-403-44	IC MN1280-S

<COIL>

L3401	1-408-421-00	INDUCTOR	100UH
L3461	1-408-409-00	INDUCTOR	10UH
L3462	1-408-421-00	INDUCTOR	100UH

<TRANSFORMER>

Q3441	8-729-422-27	TRANSISTOR 2SD601A-Q
Q3444	8-729-903-10	TRANSISTOR FMW1

<RESISTOR>

R3401	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R3402	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R3403	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R3404	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3405	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R3406	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R3407	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3408	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R3409	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3441	1-216-025-00	METAL GLAZE	100	5%	1/10W
R3442	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3443	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3444	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R3445	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R3446	1-216-085-00	METAL GLAZE	33K	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R3449	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3450	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3451	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R3452	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R3453	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R3454	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3455	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3456	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3463	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3464	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3465	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3472	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3473	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3474	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R3504	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3509	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3511	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3512	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3513	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3514	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3519	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3520	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3521	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3525	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R3526	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3528	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R3529	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R3530	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3531	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3532	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3535	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3537	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R3540	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

<CONNECTOR>

S-42	*1-568-378-21	PIN, CONNECTOR 3P
S-43	*1-564-508-11	PLUG, CONNECTOR 5P
S-45	*1-564-511-71	PLUG, CONNECTOR 8P
S-46	*1-564-506-11	PLUG, CONNECTOR 3P
S-47	*1-564-506-11	PLUG, CONNECTOR 3P

<CRYSTAL>

X3401	1-577-358-21	VIBRATOR, CERAMIC
X3441	1-577-364-11	VIBRATOR, CERAMIC

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*A-1394-429-A U BOARD, COMPLETE
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<CAPACITOR>

C1004	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C1005	1-126-301-11	ELECT	1MF	20%	50V
C1006	1-164-096-11	CERAMIC	0.01MF		50V
C1007	1-124-598-11	ELECT	22MF	20%	25V
C1008	1-124-598-11	ELECT	22MF	20%	25V
C1010	1-124-465-00	ELECT	0.47MF	20%	50V
C1011	1-124-465-00	ELECT	0.47MF	20%	50V
C1012	1-124-465-00	ELECT	0.47MF	20%	50V
C1013	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C1014	1-126-163-11	ELECT	4.7MF	20%	50V
C1016	1-126-163-11	ELECT	4.7MF	20%	50V
C1018	1-126-301-11	ELECT	1MF	20%	50V
C1020	1-124-242-00	ELECT	33MF	20%	25V
C1021	1-124-465-00	ELECT	0.47MF	20%	50V
C1022	1-124-242-00	ELECT	33MF	20%	25V
C1026	1-102-949-00	CERAMIC	12PF	5%	50V
C1027	1-102-949-00	CERAMIC	12PF	5%	50V
C1028	1-124-242-00	ELECT	33MF	20%	25V
C1029	1-124-282-00	ELECT	22MF	20%	16V
C1030	1-124-478-11	ELECT	100MF	20%	25V
C1031	1-102-963-00	CERAMIC	33PF	5%	50V
C1034	1-124-282-00	ELECT	22MF	20%	16V
C1036	1-124-282-00	ELECT	22MF	20%	16V
C1037	1-124-282-00	ELECT	22MF	20%	16V
C1039	1-124-478-11	ELECT	100MF	20%	25V
C1047	1-124-465-00	ELECT	0.47MF	20%	50V
C1048	1-126-301-11	ELECT	1MF	20%	50V
C1049	1-124-598-11	ELECT	22MF	20%	25V
C1051	1-124-465-00	ELECT	0.47MF	20%	50V
C1055	1-124-589-11	ELECT	47MF	20%	16V
C1056	1-124-499-11	ELECT	1MF	20%	50V
C1057	1-124-768-11	ELECT	4.7MF	20%	50V
C1059	1-124-499-11	ELECT	1MF	20%	50V
C1060	1-124-499-11	ELECT	1MF	20%	50V
C1061	1-124-499-11	ELECT	1MF	20%	50V
C1062	1-102-129-00	CERAMIC	0.01MF	10%	50V
C1063	1-124-768-11	ELECT	4.7MF	20%	50V
C1066	1-126-101-11	ELECT	100MF	20%	16V

<DIODE>

D1005	8-719-110-36	DIODE RD13ESB2
D1009	8-719-110-36	DIODE RD13ESB2
D1010	8-719-110-36	DIODE RD13ESB2
D1011	8-719-110-36	DIODE RD13ESB2
D1012	8-719-110-36	DIODE RD13ESB2
D1013	8-719-110-36	DIODE RD13ESB2
D1017	8-719-110-36	DIODE RD13ESB2
D1018	8-719-110-36	DIODE RD13ESB2
D1019	8-719-110-36	DIODE RD13ESB2
D1020	8-719-109-66	DIODE RD3.3ESB2
D1021	8-719-109-66	DIODE RD3.3ESB2
D1022	8-719-109-66	DIODE RD3.3ESB2

<IC>

IC1002	8-752-056-50	IC CXA1545S
IC1011	8-759-145-57	IC UPC4557C

<COIL>

L1001	1-408-422-00	INDUCTOR	120UH
L1002	1-408-422-00	INDUCTOR	120UH

<TRANSFORMER>

Q1009	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1010	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1016	8-729-119-76	TRANSISTOR 2S1175-HFE
Q1017	8-729-119-76	TRANSISTOR 2S1175-HFE
Q1018	8-729-141-26	TRANSISTOR 2SC3622A-LK
Q1019	8-729-119-76	TRANSISTOR 2S1175-HFE
Q1020	8-729-119-76	TRANSISTOR 2S1175-HFE
Q1021	8-729-119-76	TRANSISTOR 2S1175-HFE
Q1022	8-729-141-26	TRANSISTOR 2SC3622A-LK

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REF.NO.	PART NO.	DESCRIPTION				REMARK
Q1023	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1029	8-729-119-76	TRANSISTOR 2S1175-HFE				
Q1030	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1031	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1032	8-729-119-76	TRANSISTOR 2S1175-HFE				
Q1033	8-729-119-76	TRANSISTOR 2S1175-HFE				
Q1034	8-729-119-76	TRANSISTOR 2S1175-HFE				
		<RESISTOR>				
R1011	1-249-435-11	CARBON	33K	5%	1/4W	
R1012	1-249-434-11	CARBON	27K	5%	1/4W	
R1013	1-249-417-11	CARBON	1K	5%	1/4W	
R1014	1-249-441-11	CARBON	100K	5%	1/4W	
R1015	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1016	1-249-441-11	CARBON	100K	5%	1/4W	
R1017	1-249-405-11	CARBON	100	5%	1/4W	
R1018	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1019	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1023	1-249-405-11	CARBON	100	5%	1/4W	
R1026	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1028	1-249-434-11	CARBON	27K	5%	1/4W	
R1029	1-249-435-11	CARBON	33K	5%	1/4W	
R1030	1-249-417-11	CARBON	1K	5%	1/4W	
R1032	1-249-417-11	CARBON	1K	5%	1/4W	
R1033	1-249-393-11	CARBON	10	5%	1/4W	F
R1034	1-249-417-11	CARBON	1K	5%	1/4W	
R1036	1-247-883-00	CARBON	150K	5%	1/4W	
R1037	1-247-883-00	CARBON	150K	5%	1/4W	
R1038	1-247-883-00	CARBON	150K	5%	1/4W	
R1043	1-249-417-11	CARBON	1K	5%	1/4W	
R1046	1-249-413-11	CARBON	470	5%	1/4W	
R1048	1-249-405-11	CARBON	100	5%	1/4W	
R1050	1-249-405-11	CARBON	100	5%	1/4W	
R1051	1-249-417-11	CARBON	1K	5%	1/4W	
R1052	1-249-413-11	CARBON	470	5%	1/4W	
R1054	1-249-405-11	CARBON	100	5%	1/4W	
R1055	1-249-413-11	CARBON	470	5%	1/4W	
R1056	1-249-405-11	CARBON	100	5%	1/4W	
R1057	1-249-441-11	CARBON	100K	5%	1/4W	
R1059	1-249-405-11	CARBON	100	5%	1/4W	
R1061	1-249-409-11	CARBON	220	5%	1/4W	
R1062	1-249-441-11	CARBON	100K	5%	1/4W	
R1063	1-249-409-11	CARBON	220	5%	1/4W	
R1066	1-215-437-00	METAL	4.7K	1%	1/4W	
R1067	1-215-437-00	METAL	4.7K	1%	1/4W	
R1068	1-215-437-00	METAL	4.7K	1%	1/4W	
R1069	1-215-437-00	METAL	4.7K	1%	1/4W	
R1070	1-249-411-11	CARBON	330	5%	1/4W	
R1071	1-249-431-11	CARBON	15K	5%	1/4W	
R1073	1-249-431-11	CARBON	15K	5%	1/4W	
R1077	1-249-418-11	CARBON	1.2K	5%	1/4W	
R1078	1-249-418-11	CARBON	1.2K	5%	1/4W	
R1079	1-249-405-11	CARBON	100	5%	1/4W	
R1080	1-215-423-00	METAL	1.2K	1%	1/4W	
R1081	1-215-421-00	METAL	1K	1%	1/4W	
R1089	1-249-405-11	CARBON	100	5%	1/4W	
R1094	1-249-405-11	CARBON	100	5%	1/4W	
R1096	1-249-405-11	CARBON	100	5%	1/4W	
R1099	1-249-413-11	CARBON	470	5%	1/4W	
R1110	1-249-405-11	CARBON	100	5%	1/4W	
R1116	1-249-441-11	CARBON	100K	5%	1/4W	
R1118	1-249-413-11	CARBON	470	5%	1/4W	
R1120	1-249-413-11	CARBON	470	5%	1/4W	
R1121	1-249-441-11	CARBON	100K	5%	1/4W	
R1122	1-249-413-11	CARBON	470	5%	1/4W	
R1133	1-249-405-11	CARBON	100	5%	1/4W	
R1134	1-249-405-11	CARBON	100	5%	1/4W	
R1137	1-249-411-11	CARBON	330	5%	1/4W	
R1138	1-249-415-11	CARBON	680	5%	1/4W	
R1139	1-249-413-11	CARBON	470	5%	1/4W	
R1140	1-249-413-11	CARBON	470	5%	1/4W	
R1141	1-249-413-11	CARBON	470	5%	1/4W	
R1142	1-249-415-11	CARBON	680	5%	1/4W	
R1147	1-249-405-11	CARBON	100	5%	1/4W	
R1148	1-249-405-11	CARBON	100	5%	1/4W	
R1149	1-249-417-11	CARBON	1K	5%	1/4W	
R1150	1-249-405-11	CARBON	100	5%	1/4W	
R1151	1-249-405-11	CARBON	100	5%	1/4W	
R1152	1-249-417-11	CARBON	1K	5%	1/4W	
		<CONNECTOR>				
U-12	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P				
U-13	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P				
U-16	*1-564-513-11	PLUG, CONNECTOR 10P				
U-22	1-566-942-11	CONNECTOR,HINGE(RECEPTACLE)30P				
U-23	*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)18P				
U-32	*1-564-510-11	PLUG, CONNECTOR 7P				
U-47	*1-564-506-11	PLUG, CONNECTOR 3P				
**********						
	*A-1394-434-A	UT BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C1152	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1153	1-164-096-11	CERAMIC	0.01MF		50V	
C1154	1-164-096-11	CERAMIC	0.01MF		50V	
C1155	1-126-103-11	ELECT	470MF	20%	16V	
C1158	1-124-598-11	ELECT	22MF	20%	25V	
C1159	1-124-598-11	ELECT	22MF	20%	25V	
C1160	1-124-598-11	ELECT	22MF	20%	25V	
C1161	1-124-598-11	ELECT	22MF	20%	25V	
C1164	1-126-103-11	ELECT	470MF	20%	16V	
C1165	1-126-301-11	ELECT	1MF	20%	50V	
C1166	1-126-301-11	ELECT	1MF	20%	50V	
C1167	1-126-301-11	ELECT	1MF	20%	50V	
C1168	1-126-301-11	ELECT	1MF	20%	50V	
C1199	1-102-129-00	CERAMIC	0.01MF	10%	50V	
C1200	1-102-129-00	CERAMIC	0.01MF	10%	50V	
		<DIODE>				
D1151	8-719-110-36	DIODE RD13ESB2				
D1152	8-719-110-36	DIODE RD13ESB2				
D1158	8-719-110-36	DIODE RD13ESB2				
D1159	8-719-110-36	DIODE RD13ESB2				
D1160	8-719-110-36	DIODE RD13ESB2				
D1161	8-719-110-36	DIODE RD13ESB2				
D1162	8-719-110-36	DIODE RD13ESB2				
D1163	8-719-110-36	DIODE RD13ESB2				
D1164	8-719-110-36	DIODE RD13ESB2				
D1165	8-719-110-36	DIODE RD13ESB2				
D1166	8-719-110-36	DIODE RD13ESB2				
D1167	8-719-110-36	DIODE RD13ESB2				
D1168	8-719-110-36	DIODE RD13ESB2				

UT

...parts identified by ⚠ mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1169	8-719-110-36	DIODE RD13ESB2	
D1170	8-719-110-36	DIODE RD13ESB2	
D1171	8-719-110-36	DIODE RD13ESB2	
		<JACK>	
J1001	1-537-188-11	TERMINAL, PUSH (8P)	
J1003	1-573-970-11	BLOCK, (S) TERMINAL	
J1004	1-695-304-11	TERMINAL BLOCK, S	
J1005	1-695-054-11	JACK BLOCK, PIN	
J1006	1-573-970-11	BLOCK, (S) TERMINAL	
J1007	1-573-969-11	JACK BLOCK, PIN	
J1008	1-573-969-11	JACK BLOCK, PIN	
		<RESISTOR>	
R1153	1-249-403-11	CARBON 68 5% 1/4W	
R1154	1-249-429-11	CARBON 10K 5% 1/4W	
R1158	1-247-804-11	CARBON 75 5% 1/4W	
R1164	1-247-895-00	CARBON 470K 5% 1/4W	
R1165	1-247-895-00	CARBON 470K 5% 1/4W	
R1166	1-247-895-00	CARBON 470K 5% 1/4W	
R1167	1-247-895-00	CARBON 470K 5% 1/4W	
R1168	1-247-895-00	CARBON 470K 5% 1/4W	
R1169	1-249-403-11	CARBON 68 5% 1/4W	
R1170	1-249-403-11	CARBON 68 5% 1/4W	
R1171	1-247-895-00	CARBON 470K 5% 1/4W	
R1172	1-247-895-00	CARBON 470K 5% 1/4W	
R1173	1-247-804-11	CARBON 75 5% 1/4W	
R1174	1-247-895-00	CARBON 470K 5% 1/4W	
R1175	1-247-895-00	CARBON 470K 5% 1/4W	
R1176	1-247-804-11	CARBON 75 5% 1/4W	
R1177	1-247-804-11	CARBON 75 5% 1/4W	
R1178	1-247-895-00	CARBON 470K 5% 1/4W	
R1179	1-247-895-00	CARBON 470K 5% 1/4W	
R1180	1-247-804-11	CARBON 75 5% 1/4W	
R1181	1-247-804-11	CARBON 75 5% 1/4W	
R1182	1-247-804-11	CARBON 75 5% 1/4W	
R1183	1-247-895-00	CARBON 470K 5% 1/4W	
R1184	1-247-895-00	CARBON 470K 5% 1/4W	
R1185	1-247-895-00	CARBON 470K 5% 1/4W	
R1186	1-247-895-00	CARBON 470K 5% 1/4W	
R1187	1-247-804-11	CARBON 75 5% 1/4W	
R1188	1-247-804-11	CARBON 75 5% 1/4W	
R1191	1-249-425-11	CARBON 4.7K 5% 1/4W	
R1192	1-249-425-11	CARBON 4.7K 5% 1/4W	
R1193	1-249-425-11	CARBON 4.7K 5% 1/4W	
R1194	1-249-425-11	CARBON 4.7K 5% 1/4W	
R1195	1-249-429-11	CARBON 10K 5% 1/4W	
R1196	1-249-429-11	CARBON 10K 5% 1/4W	
		<SWITCH>	
S1150	1-572-198-11	SWITCH, KEYBOARD	
		<CONNECTOR>	
UT9	*1-564-517-11	PLUG, CONNECTOR 2P	
UT11	*1-564-519-11	PLUG, CONNECTOR 4P	
UT22	*1-566-941-11	CONNECTOR, HINGE (TAB) 30P	
UT23	*1-566-641-11	CONNECTOR, HINGE (TAB) 18P	
UT35	*1-564-518-11	PLUG, CONNECTOR 3P	
UT38	*1-564-517-11	PLUG, CONNECTOR 2P	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		**********	
		MISCELLANEOUS	
		**********	
	⚠1-241-744-11	RESISTOR ASSY (HIGH-VOLTAGE)	
	1-417-178-11	SELECTOR, ANTENNA (AS-2)	
	⚠1-451-396-21	DEFLECTION YOKE (Y936PA)	
	⚠1-452-443-13	NECK ASSY, PICTURE TUBE (NA367)	
	⚠1-453-108-11	DC BLOCK, HIGH-VOLTAGE	
	1-504-141-11	SPEAKER (13CM) (KP-46BXR25/53BXR25(U/C))	
	1-544-580-21	SPEAKER (2.5CM) (KP-46XBR25/53XBR25(U/C))	
	1-504-312-11	SPEAKER (SQUAWKER) (5CM) (KP-61XBR28)	
	1-504-313-11	SPEAKER (16CM) (KP-61XBR28)	
	*1-555-400-00	CABLE, PIN	
	*1-557-056-31	CABLE, P-P	
	1-559-865-41	LEAD ASSY, HIGH-VOLTAGE	
	⚠1-696-002-12	CORD, POWER (WITH NOISE FILTER)	
	⚠8-736-631-05	PICTURE TUBE 07MK3(G) (SD-249) (KP-46XBR25/53XBR25(U/C))	
	⚠8-736-632-05	PICTURE TUBE 07MK2(B) (SD-249) (KP-46XBR25/53XBR25(U/C))	
	⚠8-736-633-05	PICTURE TUBE 07MK2(R) (SD-249) (KP-46XBR25/53XBR25(U/C))	
	⚠8-736-634-05	PICTURE TUBE 07MK3(G) (SD-249) (KP-61XBR28)	
	⚠8-736-640-05	PICTURE TUBE 07MK2(B) (SD-249) (KP-61XBR28)	
	⚠8-736-641-05	PICTURE TUBE 07MK2(R) (SD-249) (KP-61XBR28)	
⊠R900	⚠	METAL 1/4W	
⊠R901	⚠	METAL 1/4W	
⊠R902	⚠	METAL 1/4W	
T7201	⚠1-423-311-11	TRANSFORMER, POWER	
		**********	
		ACCESSORIES & PACKING MATERIALS	
		**********	
	3-757-105-21	MANUAL, INSTRUCTION (ENGLISH)	
	3-757-105-31	MANUAL, INSTRUCTION (FRENCH) (KP-53XBR25 (C))	
	3-757-105-41	MANUAL, INSTRUCTION (SPANISH) (KP-46XBR25/53XBR25(U))	
	*4-040-535-01	BAG, POLYETHYLENE (KP-61XBR28)	
	*4-030-895-01	JOINT	
	*4-037-328-01	PLATE, TOP (KP-53XBR25(U/C)	
	*4-037-674-01	PLATE, TOP (KP-46XBR25)	
	*4-040-111-01	PLATE, TOP	
	*4-040-902-01	SHEET, PROTECTION (KP-61XBR28)	
	*4-037-329-01	PLATE, BOTTOM (KP-53XBR25(U/C))	
	*4-037-675-01	PLATE, BOTTOM (KP-46XBR25)	
	*4-040-903-01	PLATE, BOTTOM (KP-61XBR28)	
	*4-037-320-01	CUSHION (UPPER)(ASSY) (KP-53XBR25(U/C))	
	*4-037-670-01	CUSHION (UPPER)(ASSY) (KP-46XBR25)	
	*4-040-904-01	CUSHION (UPPER)(ASSY) (KP-61XBR28)	
	*4-037-321-01	CUSHION (LOWER)(ASSY) (KP-53XBR25(U/C))	
	*4-037-671-01	CUSHION (LOWER)(ASSY) (KP-46XBR25)	
	*4-040-905-01	CUSHION (LOWER)(ASSY) (KP-61XBR28)	
	*4-037-327-01	TRAY (KP-53XBR25(U/C))	
	*4-037-673-01	TRAY (KP-46XBR25)	
	*4-040-906-01	TRAY (KP-61XBR28)	
	*4-037-326-01	INDIVIDUAL CARTON (KP-53XBR25(U/C))	
	*4-037-672-01	INDIVIDUAL CARTON (KP-46XBR25)	
	*4-040-907-01	INDIVIDUAL CARTON (KP-61XBR28)	
	*4-388-954-01	BAG, PROTECTION (KP-53XBR25(U/C))	
	*4-040-902-01	SHEET, PROTECTION (KP-61XBR28)	

• The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

9-964-943-01

REF.NO.	PART NO.	DESCRIPTION	REMARK
	4-395-902-01	BAG, PROTECTION	(KP-46XBR25)
	3-704-356-01	SHEET (STANDARD), PROTECTION	(KP-46XBR25)

REMOTE COMMANDER

1-693-156-21	REMOTE COMMANDER (RM-Y114A)	
9-902-623-01	COVER, BATTERY (FOR RM-114A)	
9-902-624-01	COVER (FOR RM-114A)	

9-964-943-01

Sony Corporation
TV Group

English
93DJ0547-1
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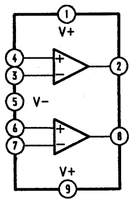
(14) SCHEMATIC DIAGRAM OF P3 BOARD

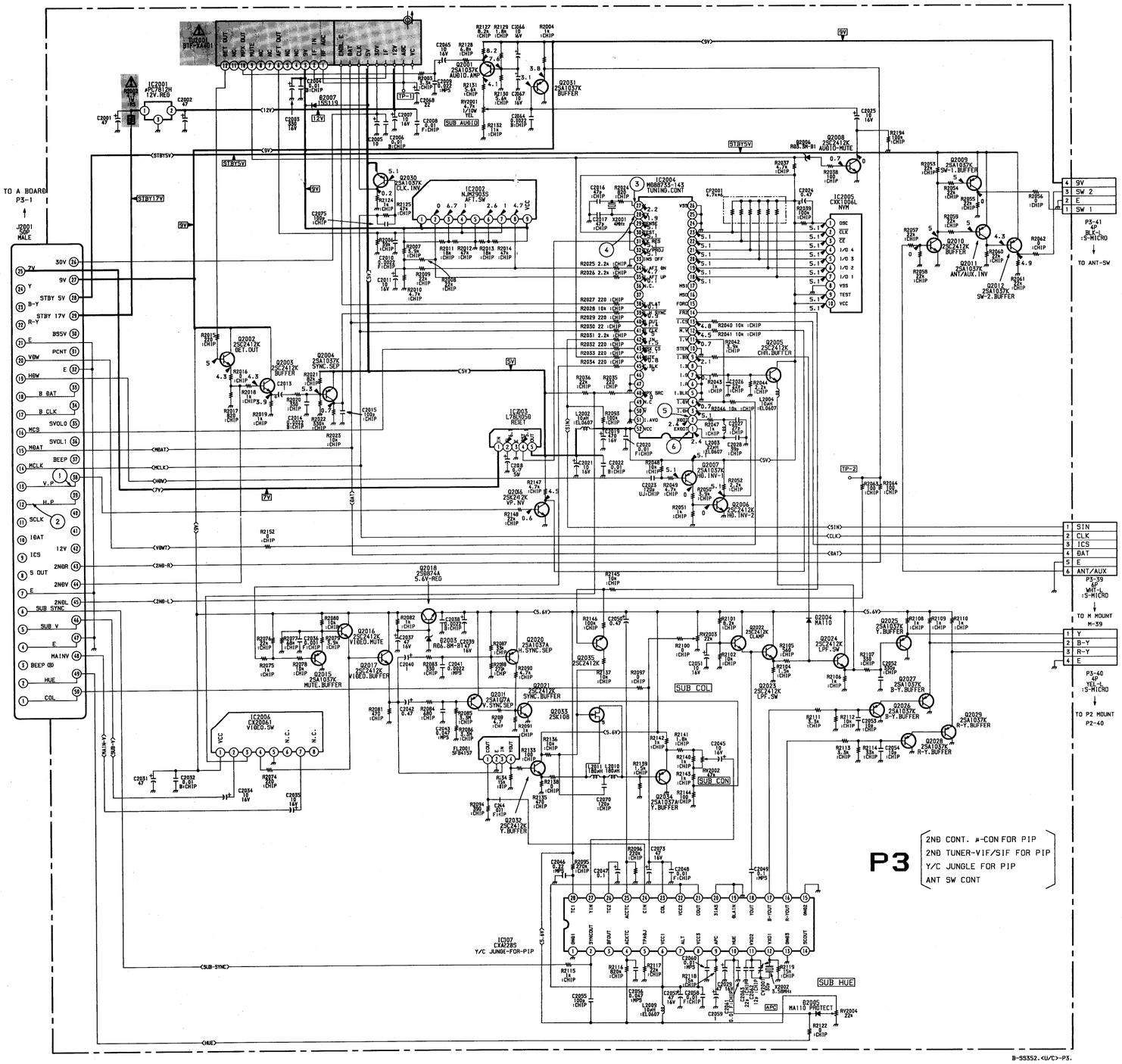
P3 Board IC2002 NJM2903S



• P3 BOARD WAVEFORMS

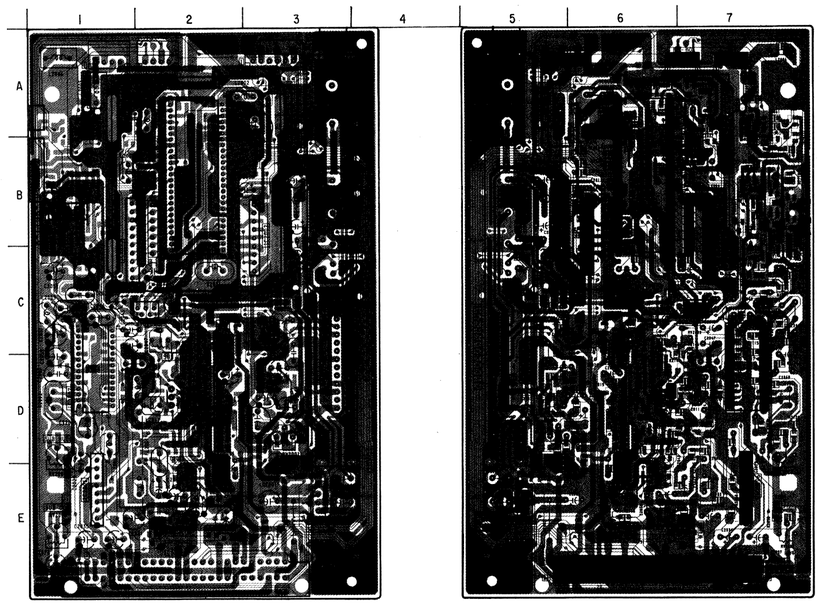
P3 BOARD B-SS352.<U/C>-P3<WAVELIST>

① 2.2Vp-p (V)	② 2.8Vp-p (H)	③ 2.8Vp-p (H)
④ 2.2Vp-p (H)	⑤ 2.6Vp-p (H)	⑥ 1.6 Vp-p (H)



P3
[2ND CONT. μ-CON FOR PIP, 2ND TUNER-VIF/SIF FOR PIP, Y/C JUNGLE FOR PIP, ANT SW CONT]

– P3 Board –

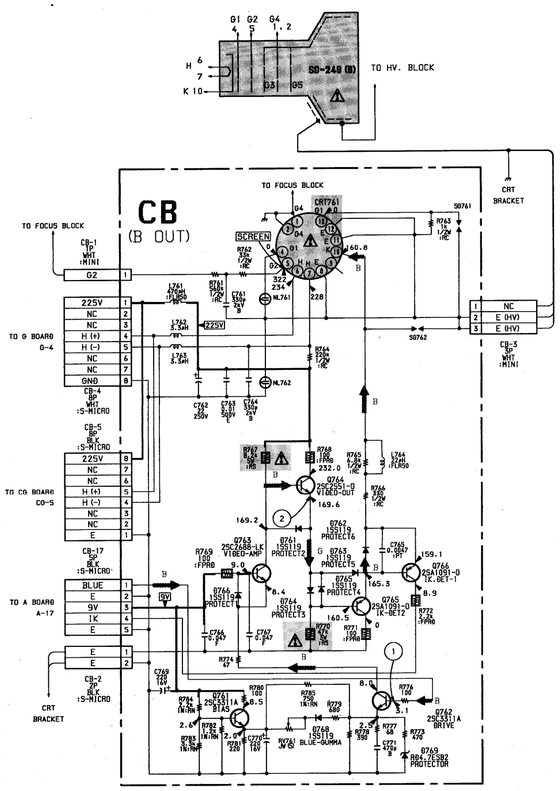


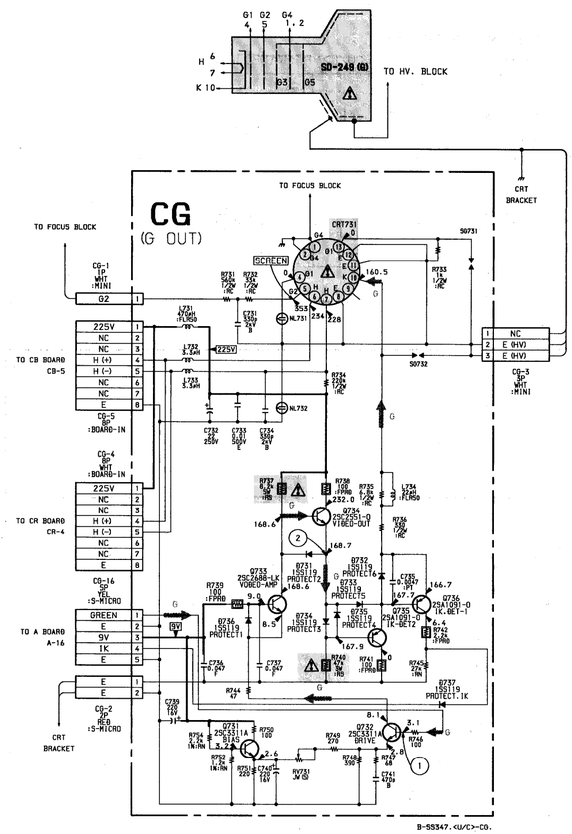
- ▒▒▒ : Pattern from the side which enables seeing.
- ▒▒▒ : Pattern of the rear side.

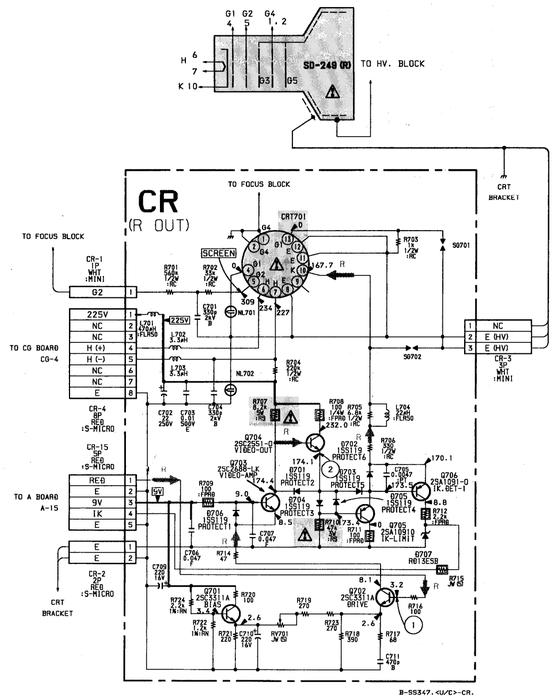
P3 Board

IC			
IC2001	E-3, E-5	Q2011	A-7
IC2002	C-3, C-6	Q2012	A-7
IC2003	C-2, C-7	Q2015	D-6
IC2004	B-2, B-6	Q2016	D-6
IC2005	C-1, C-7	Q2017	D-6
IC2006	E-1, E-7	Q2018	E-6
IC2007	D-1, D-7	Q2019	E-6
		Q2021	D-6
TRANSISTOR		Q2022	C-7
		Q2023	C-7
Q2001	D-5	Q2024	B-7
Q2002	D-6	Q2025	B-7
Q2003	D-6	Q2026	B-7
Q2004	C-6	Q2027	B-7
Q2005	B-7	Q2028	B-7
Q2006	A-6	Q2029	B-7
Q2007	A-7	Q2030	C-5
Q2008	D-5	Q2031	D-5
Q2009	A-7	Q2032	D-7
Q2010	B-7	Q2033	D-2, D-6
		Q2034	D-7
		Q2035	D-6
		Q2036	B-7

DIODE	
D2003	E-6
D2004	C-7
D2005	D-7
D2006	C-6
VARIABLE RESISTOR	
RV2001	D-3, D-5
RV2002	C-2, C-7
RV2003	E-1, E-7
RV2004	D-1, D-7
TUNER	
TU2001	D-3, D-5
CRYSTAL	
X2001	C-2, C-6
X2002	D-1, D-7







• CB BOARD WAVEFORMS

B-SS347.<U/C>-CB<WAVELIST>

①	②
1.4Vp-p (H)	50.0Vp-p (H)

• CG BOARD WAVEFORMS

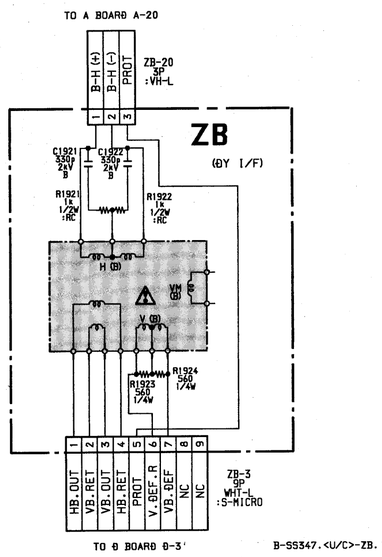
B-SS347.<U/C>-CG<WAVELIST>

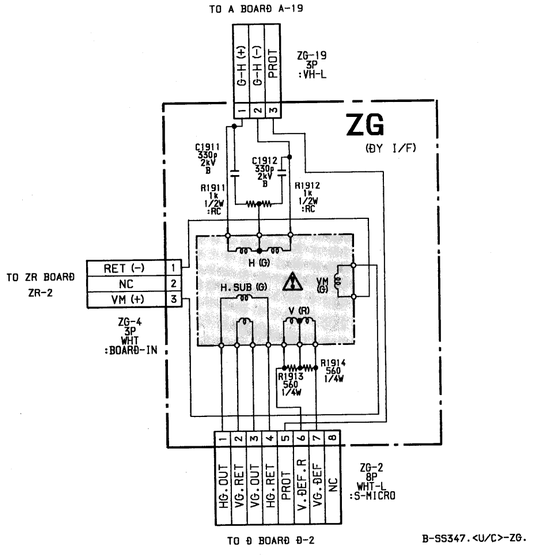
①	②
1.6Vp-p (H)	58.0Vp-p (H)

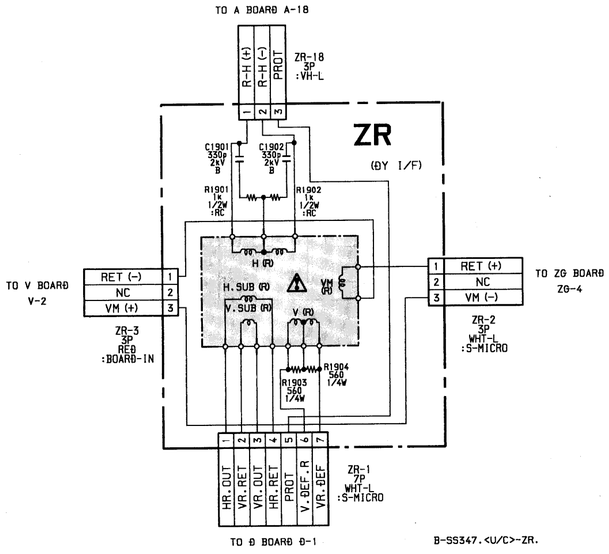
• CR BOARD WAVEFORMS

B-SS347.<U/C>-CR<WAVELIST>

①	②
1.4Vp-p (H)	50.0Vp-p (H)

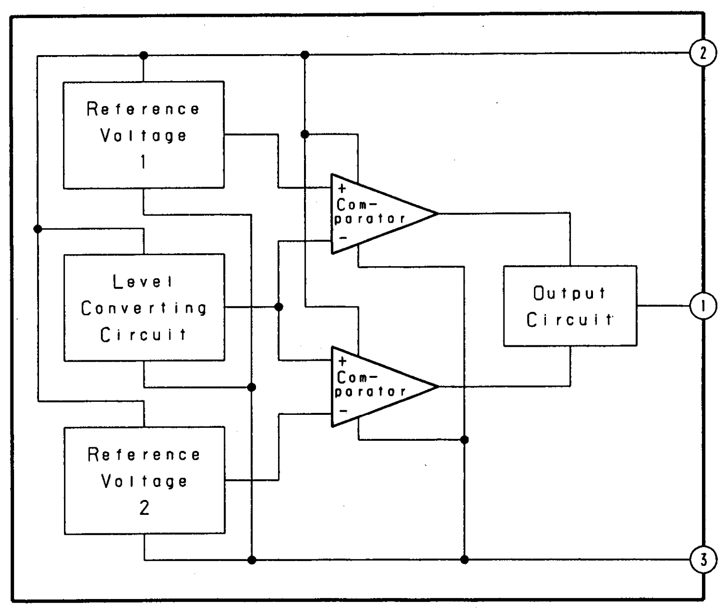


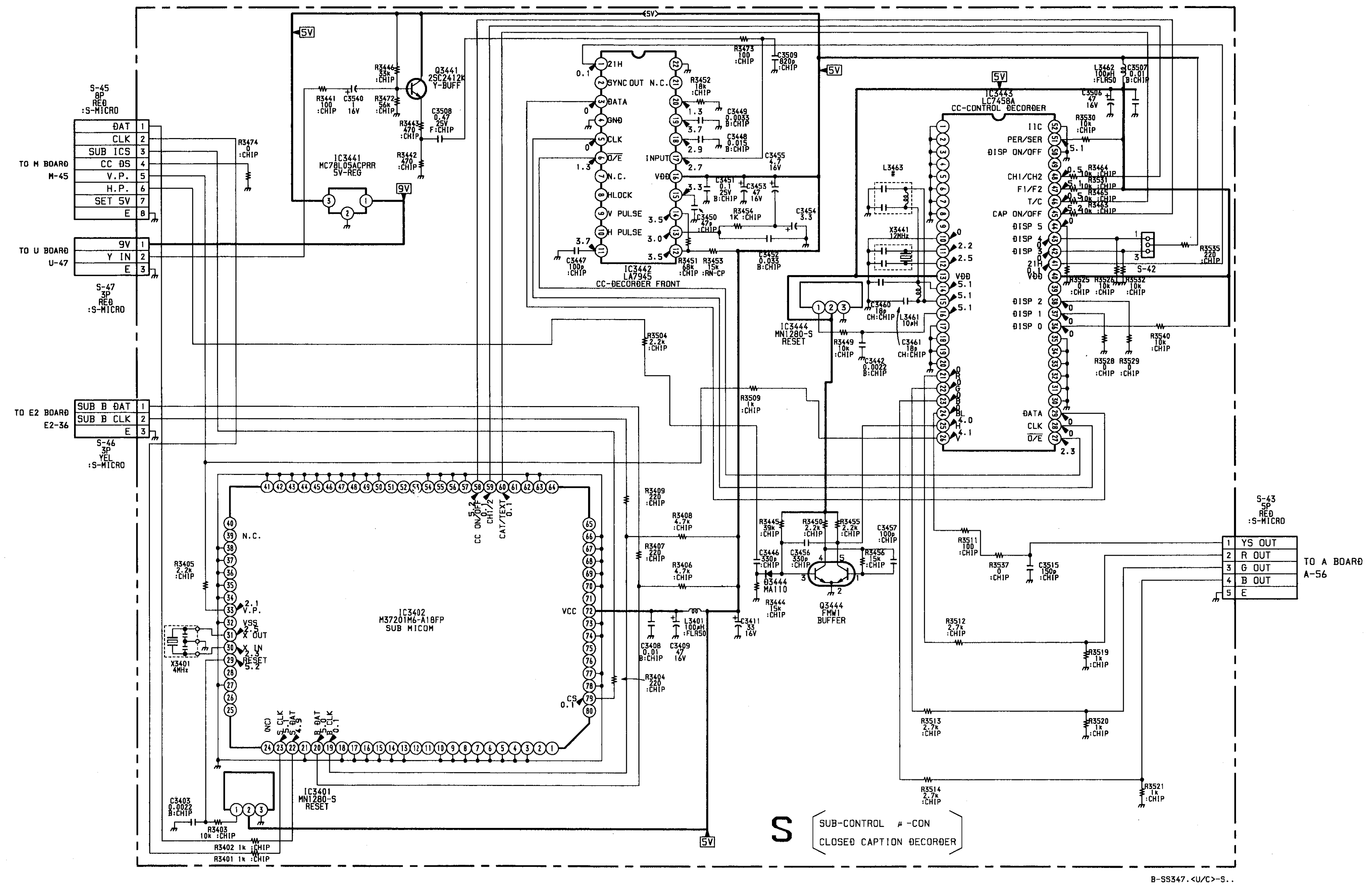




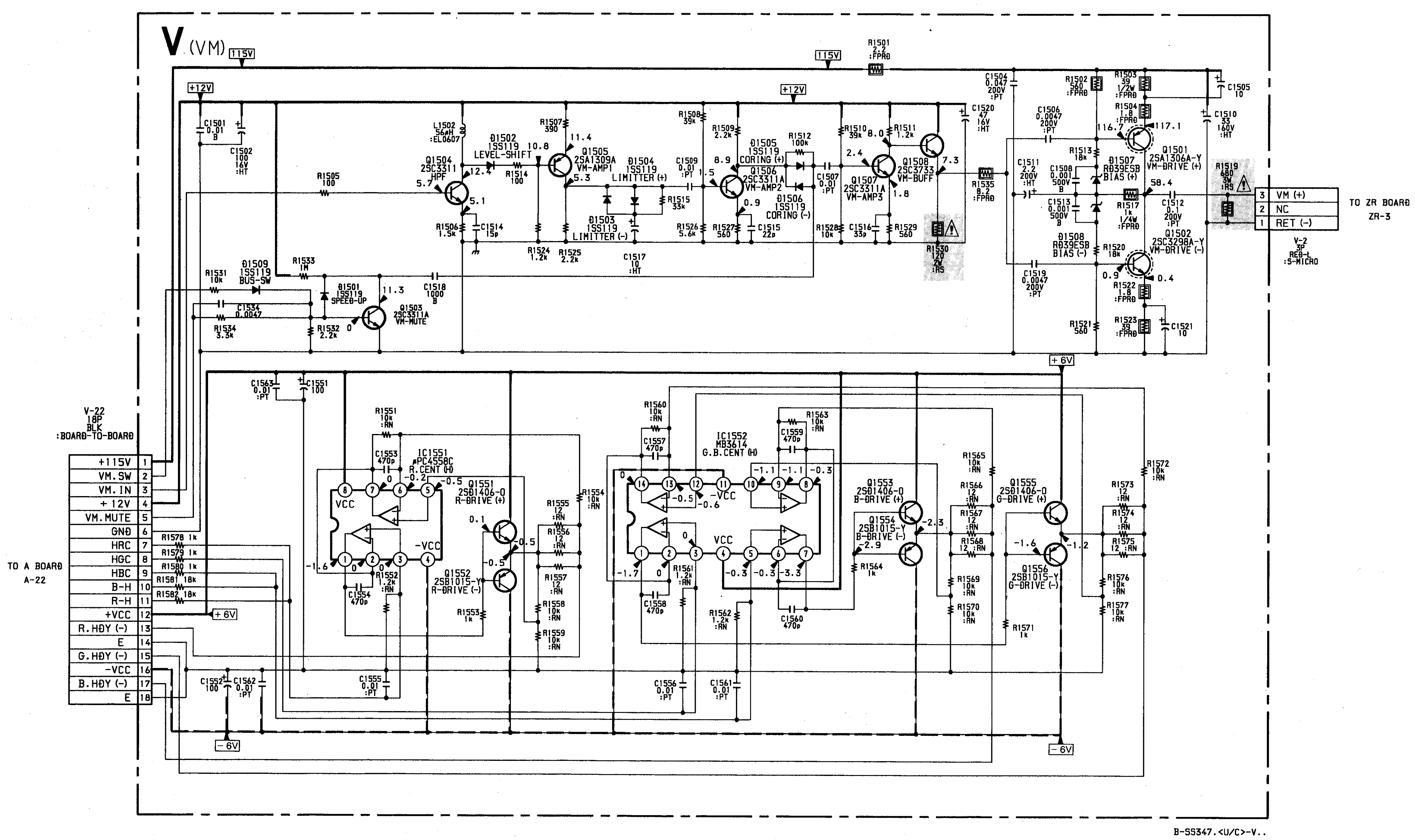
(12) SCHEMATIC DIAGRAMS OF S, V BOARDS

S Board IC3401 MN1280-S



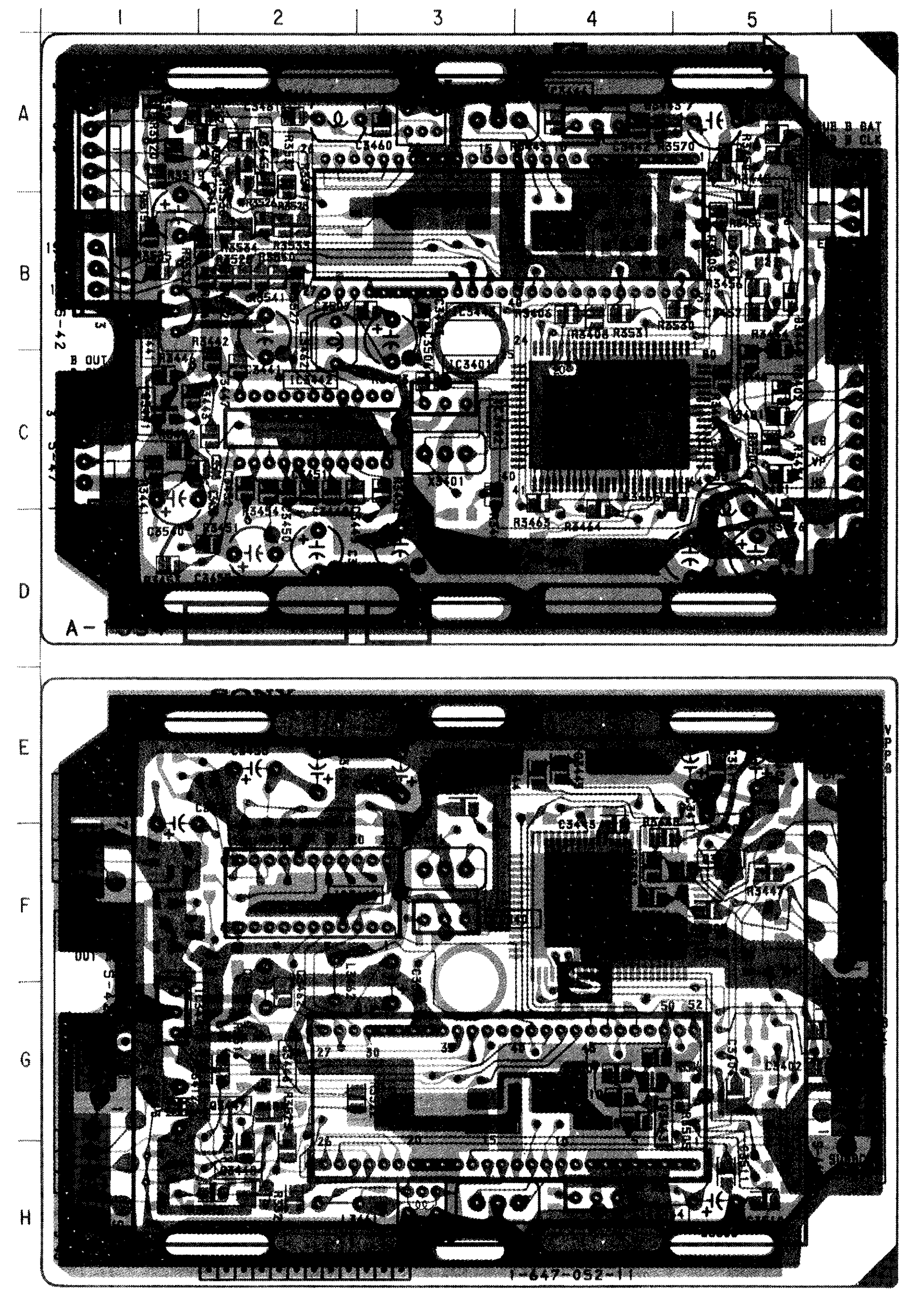


TO M BOARD M-45
TO U BOARD U-47
TO E2 BOARD E2-36
TO A BOARD A-56
IC3402 M37201M6-A18FP SUB MICOM
IC3442 LA7945 CC-DECORDER FRONT
IC3443 LC7458A CC-CONTROL DECORDER
IC3441 MC78L05ACPRR 5V-REG
IC3444 MN1280-S RESET
IC3401 MN1280-S RESET
Q3444 FMW1 BUFFER
S SUB-CONTROL μ-CON CLOSED CAPTION DECORDER
B-SS347.<U/C>-S..



S [SUB-CONTROL, μ-CON, CLOSED CAPTION DECORDER] **V** [VM]

– S Board –

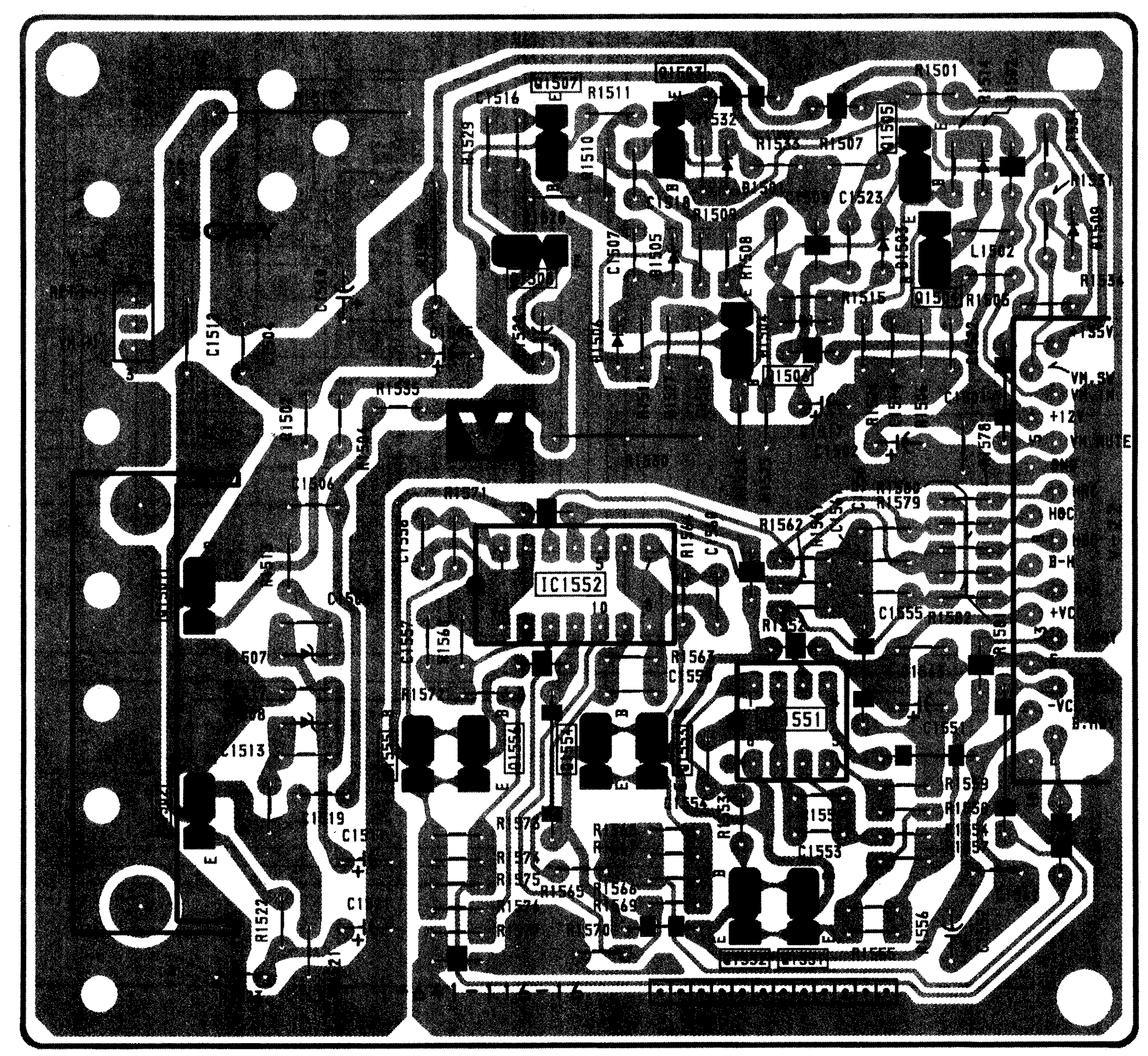


S Board

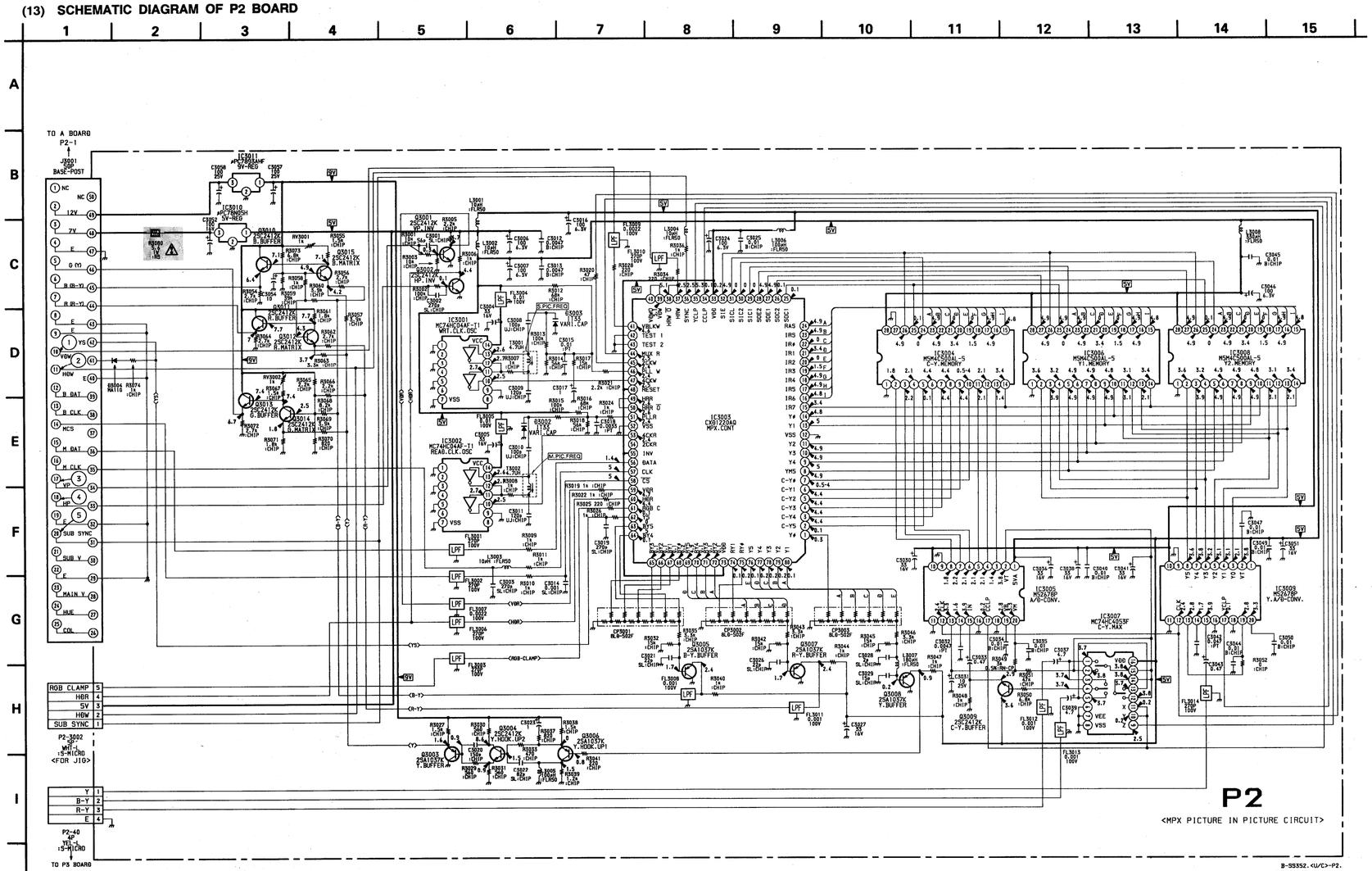
IC	
IC3401	C-3, F-1
IC3402	C-3
IC3441	B-1, G-1
IC3442	C-2, F-2
IC3443	B-3, G-3
IC3444	A-4, H-4
TRANSISTOR	
Q3441	C-1
Q3444	B-5
DIODE	
D3444	B-5

- ░░░ : Pattern from the side which enables seeing.
- ░░░ : Pattern of the rear side.

– V Board –



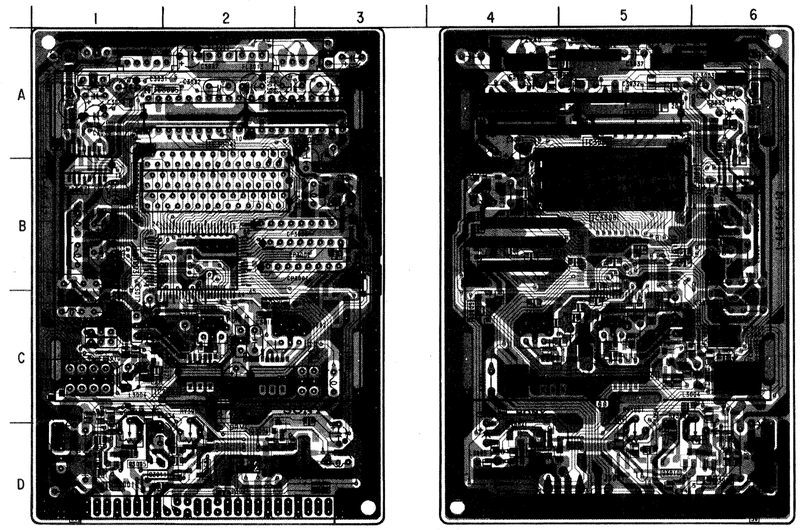
(13) SCHEMATIC DIAGRAM OF P2 BOARD



B-SS352.<U/C>-P2.

P2 [MPX PICTURE IN PICTURE CIRCUIT]

– P2 Board –



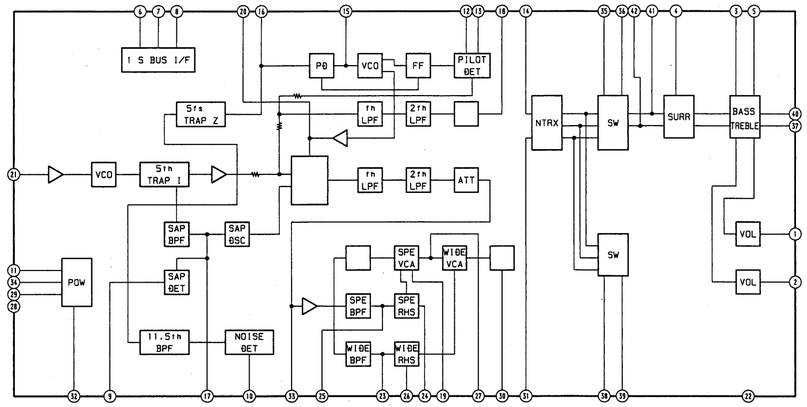
P2 Board

IC		TRANSISTOR		DIODE	
IC3001	C-2	Q3001	C-5	D3002	C-2
IC3002	C-2	Q3002	C-2	D3003	C-2
IC3003	B-2	Q3003	D-4	D3004	D-2
IC3004	A-2, B-5	Q3004	D-4		
IC3005	A-2, A-5	Q3005	C-4		
IC3006	B-2, B-5	Q3006	D-2	VARIABLE RESISTOR	
IC3007	B-1	Q3007	B-4		
IC3008	B-2, B-5	Q3008	B-4		
IC3009	A-2, A-4	Q3009	B-6	RV3001	D-2, D-5
IC3010	A-1, A-6	Q3010	D-5	RV3002	D-1, D-5
IC3011	D-1, D-6	Q3011	D-1		
		Q3012	D-2		
		Q3013	D-6		
		Q3014	D-1		
		Q3015	D-1		

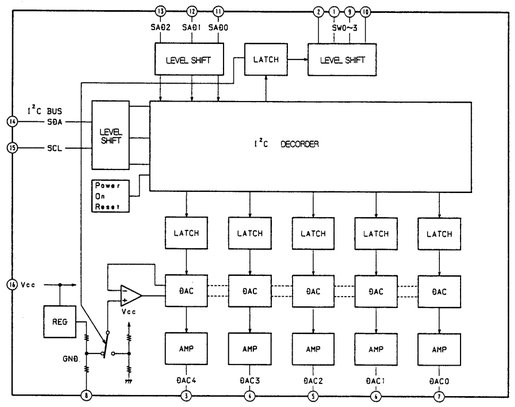
- ▒▒▒ : Pattern from the side which enables seeing.
- ▒▒▒ : Pattern of the rear side.

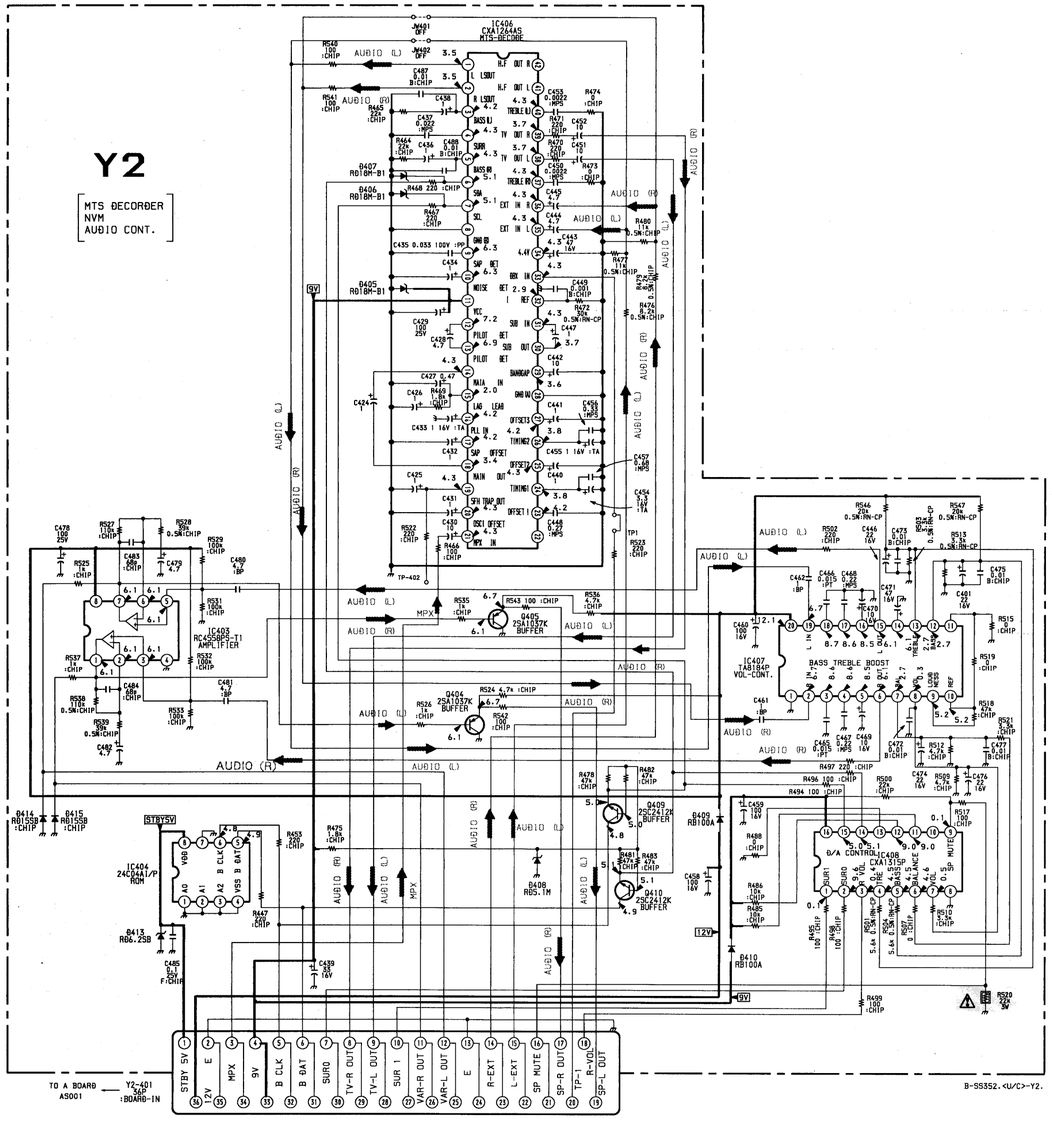
(8) SCHEMATIC DIAGRAM OF Y2 BOARD

Y2 Board IC406 CXA1264AS



Y2 Board IC408 CXA1315P

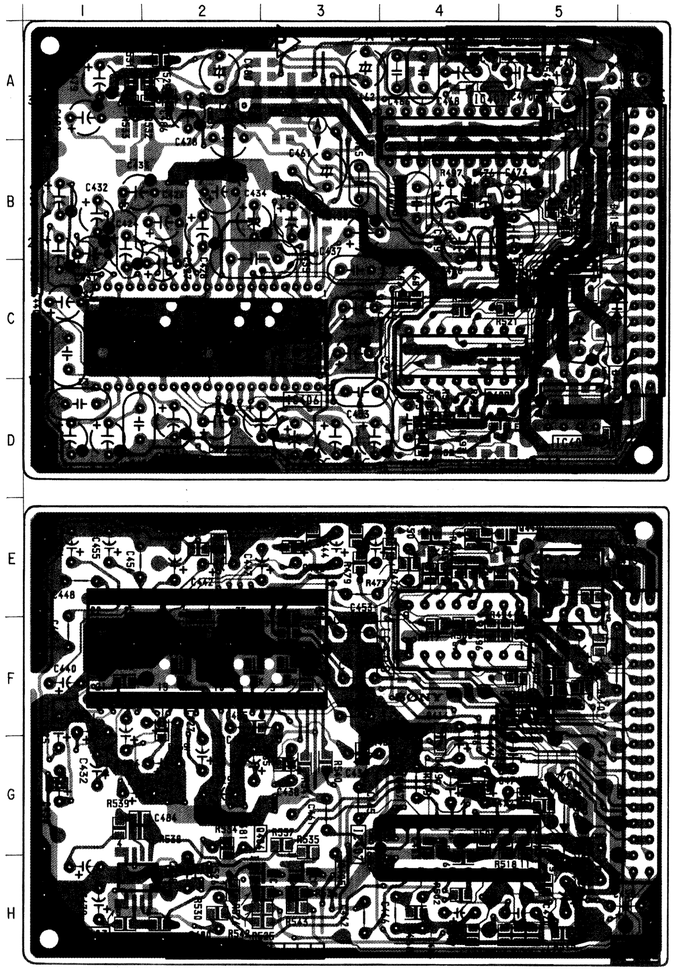




B-5352.<U/C>-Y2.

Y2 [MTS DECORDER, NVM, AUDIO CONT.]

– Y2 Board –

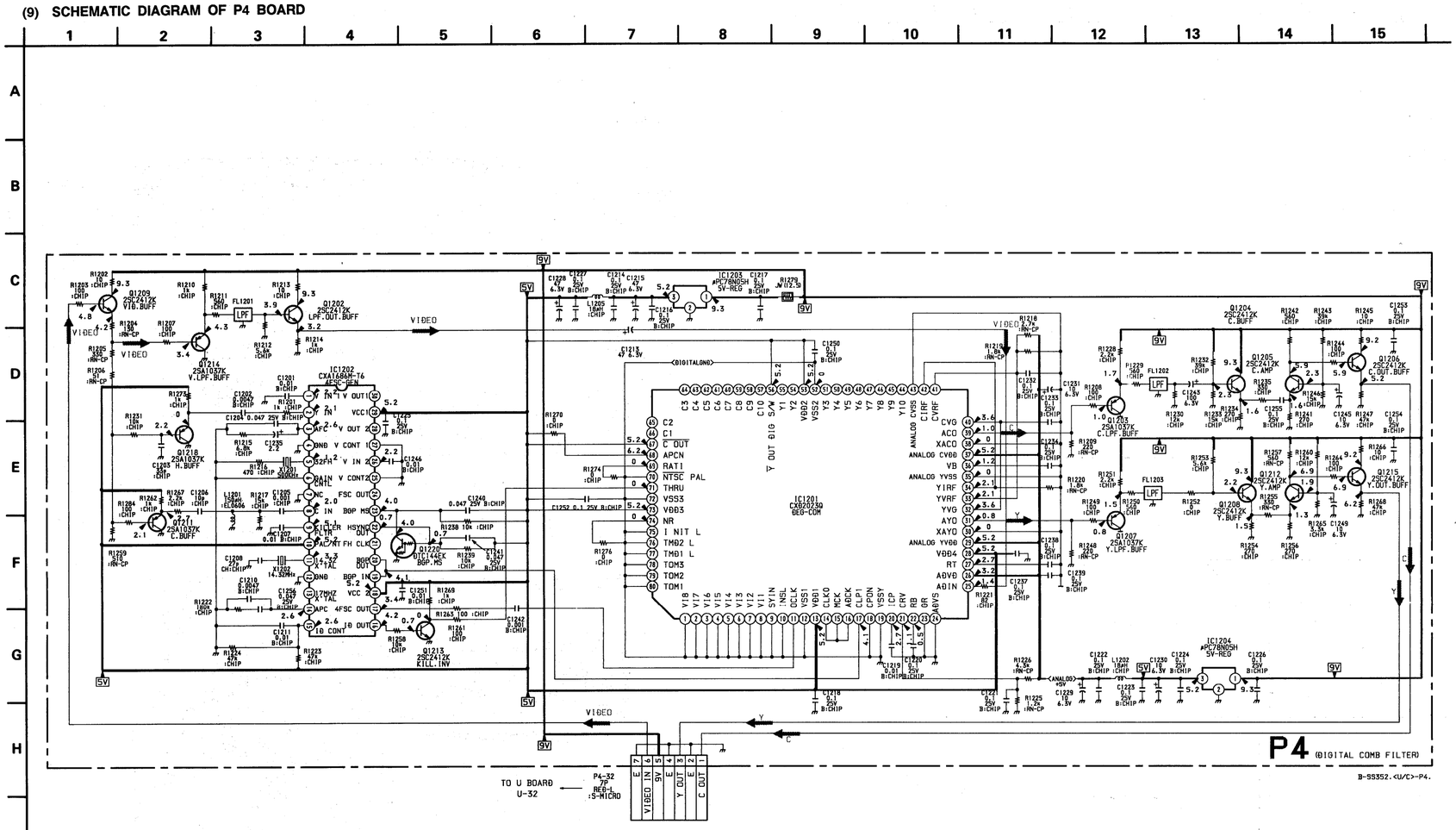


Y2 Board

IC	
IC403	H-1
IC404	D-5, E-5
IC406	C-2, F-2
IC407	A-4, G-4
IC408	C-4, F-4
TRANSISTOR	
Q404	H-3
Q405	H-3
Q409	D-5
Q410	E-5
DIODE	
D405	F-2
D406	F-2
D407	F-3
D408	E-4
D409	A-5
D410	C-5, F-5
D413	E-6
D414	F-4
D415	B-5

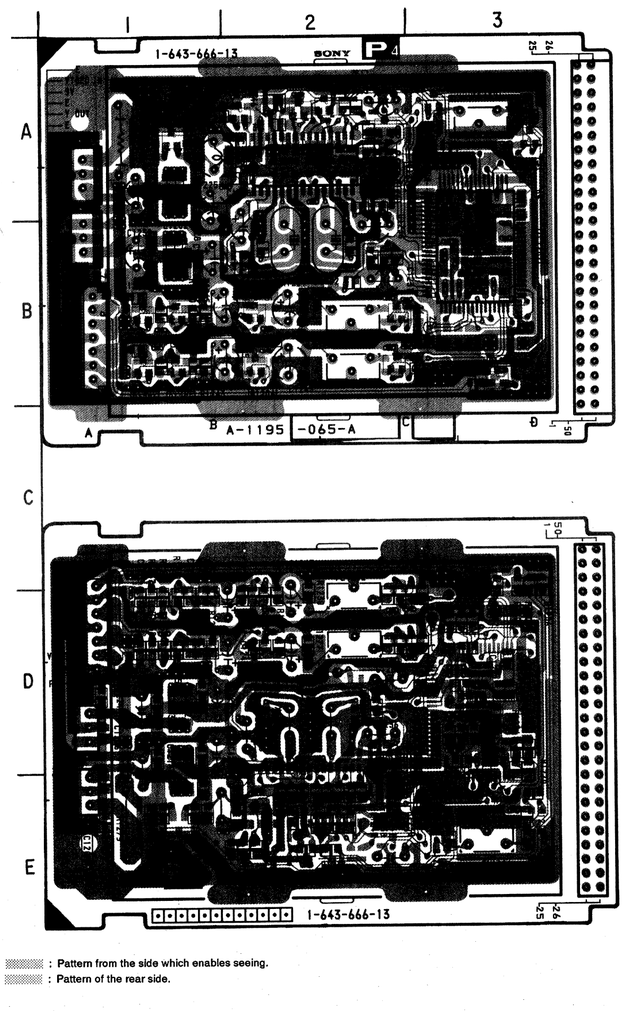
• ▒▒▒ : Pattern from the side which enables seeing.
• ▒▒▒ : Pattern of the rear side.

(9) SCHEMATIC DIAGRAM OF P4 BOARD



P4 [DIGITAL COMB FILTER]

– P4 Board –



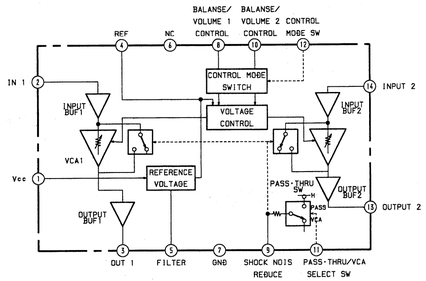
P4 Board

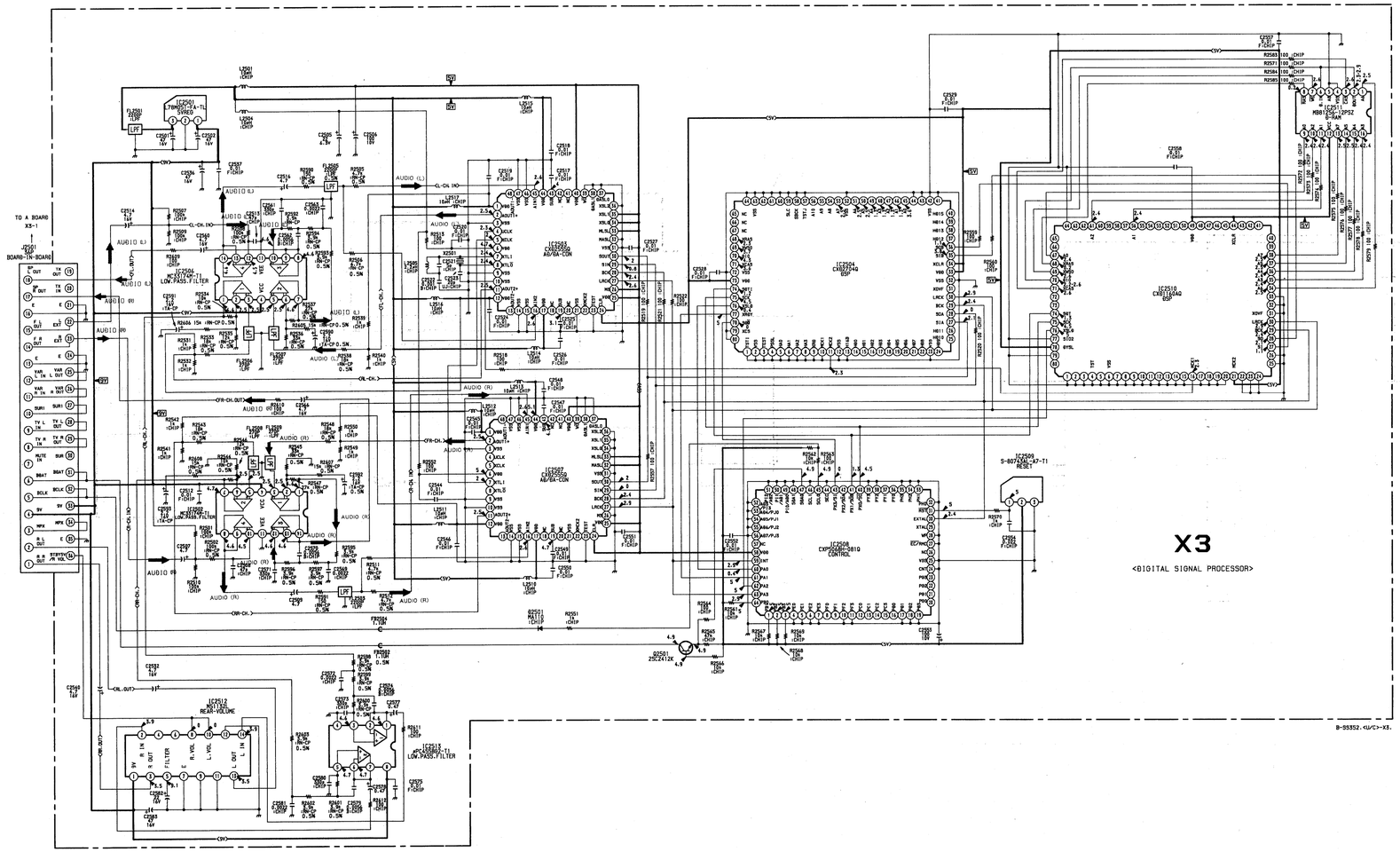
IC	
IC1201	B-3
IC1202	A-2
IC1203	A-1, E-1
IC1204	B-1, D-1
TRANSISTOR	
Q1202	A-3
Q1203	B-2
Q1204	B-2
Q1205	B-1
Q1206	B-1
Q1207	B-2
Q1208	B-2
Q1209	B-3
Q1211	A-1
Q1212	B-1
Q1213	A-2
Q1214	A-3
Q1215	B-1
Q1218	A-2
Q1220	A-2
CRYSTAL	
X1201	B-2, D-2
X1202	B-2, D-2

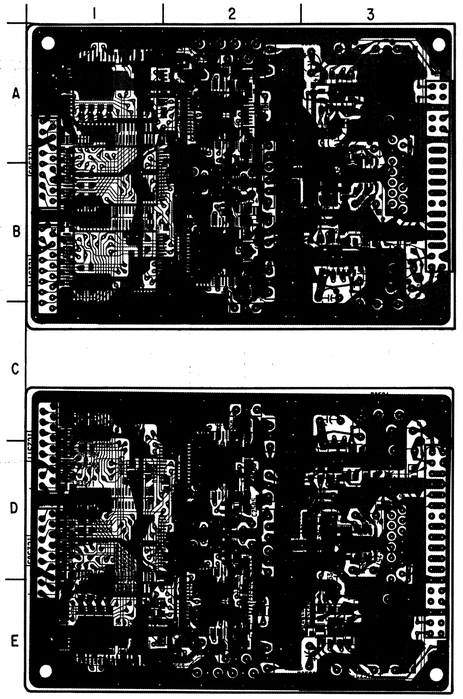
- ▒▒▒ : Pattern from the side which enables seeing.
- ▒▒▒ : Pattern of the rear side.

(7) SCHEMATIC DIAGRAM OF X3 BOARD

X3 Board IC2512 M51132L







X3 Board

IC	
IC2501	B-3
IC2502	B-3
IC2503	A-2
IC2504	B-1
IC2506	A-3
IC2507	B-2
IC2508	A-1
IC2509	A-2
IC2510	B-1
IC2511	B-1, D-1
IC2512	B-3, D-3
IC2513	B-3
TRANSISTOR	
Q2501	E-1
DIODE	
D2501	E-2
CRYSTAL	
X2501	A-2

• : Pattern from the side which enables seeing.
• : Pattern of the rear side.

• M BOARD WAVEFORMS

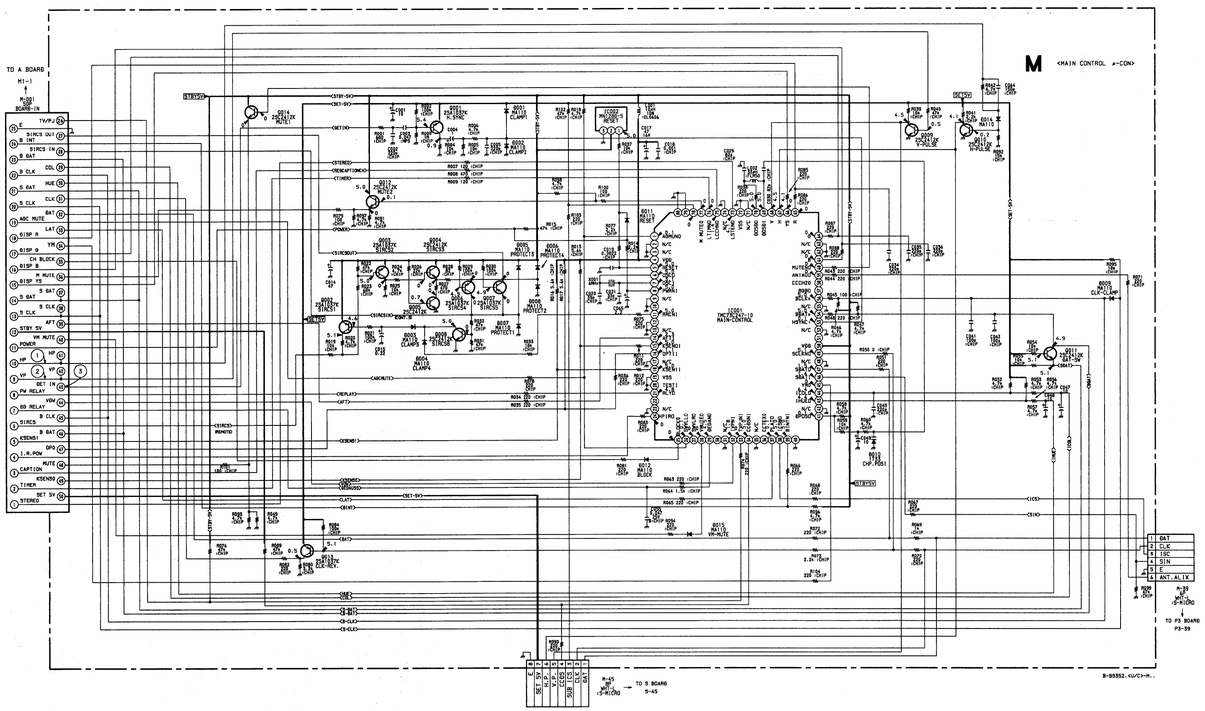
B-SS347.<U/C>- M <WAVELIST>

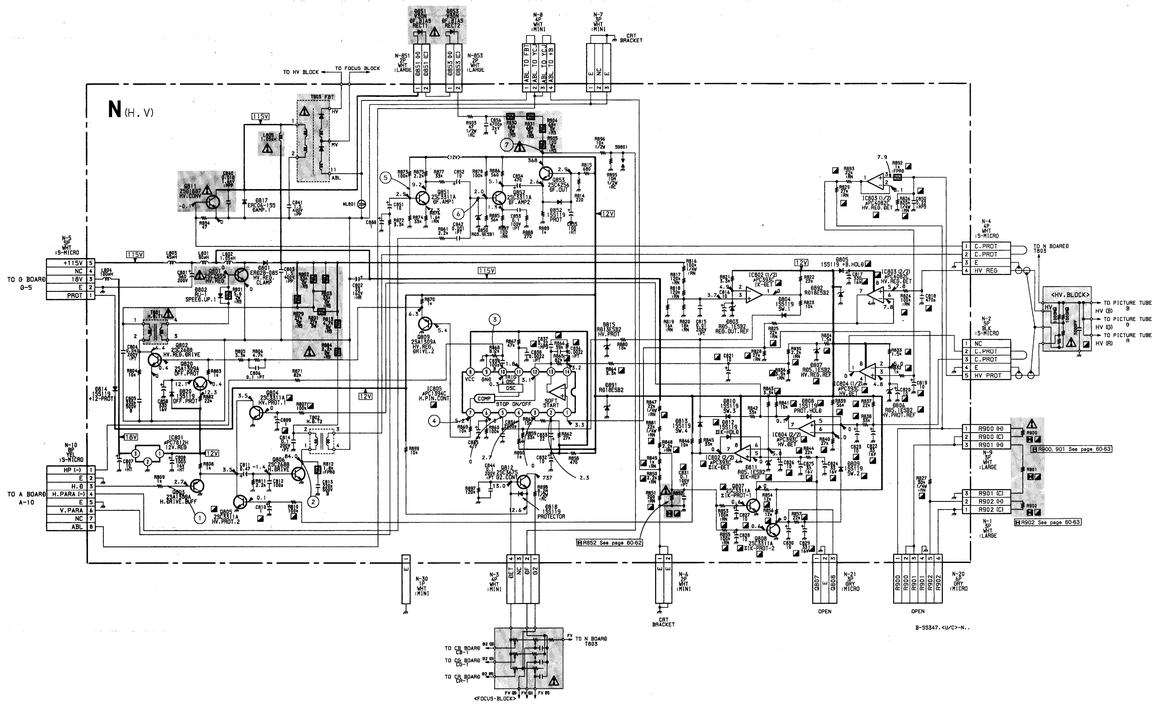
①	②	③
5Vp-p (H)	4.2Vp-p (V)	2.4Vp-p (H)

• N BOARD WAVEFORMS

B-SS347.<U/C>-N <WAVELIST>

①	②	③
1.4Vp-p (H)	55 Vp-p (H)	0.8Vp-p (H)
④	⑤	⑥
2.6Vp-p (H)	0.5 Vp-p (V)	0.5Vp-p(V)
⑦		
5.0Vp-p (V)		

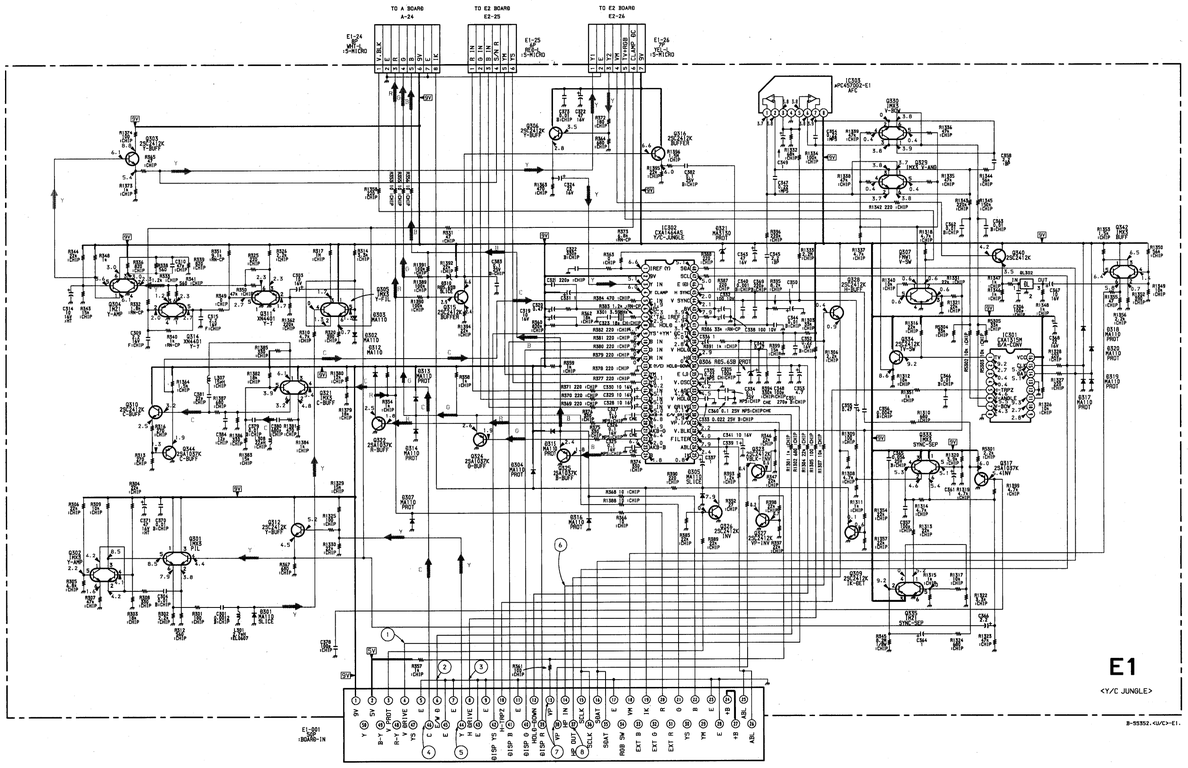




• E1 BOARD WAVEFORMS

B-SS347.<U/C>-E1<WAVELIST>

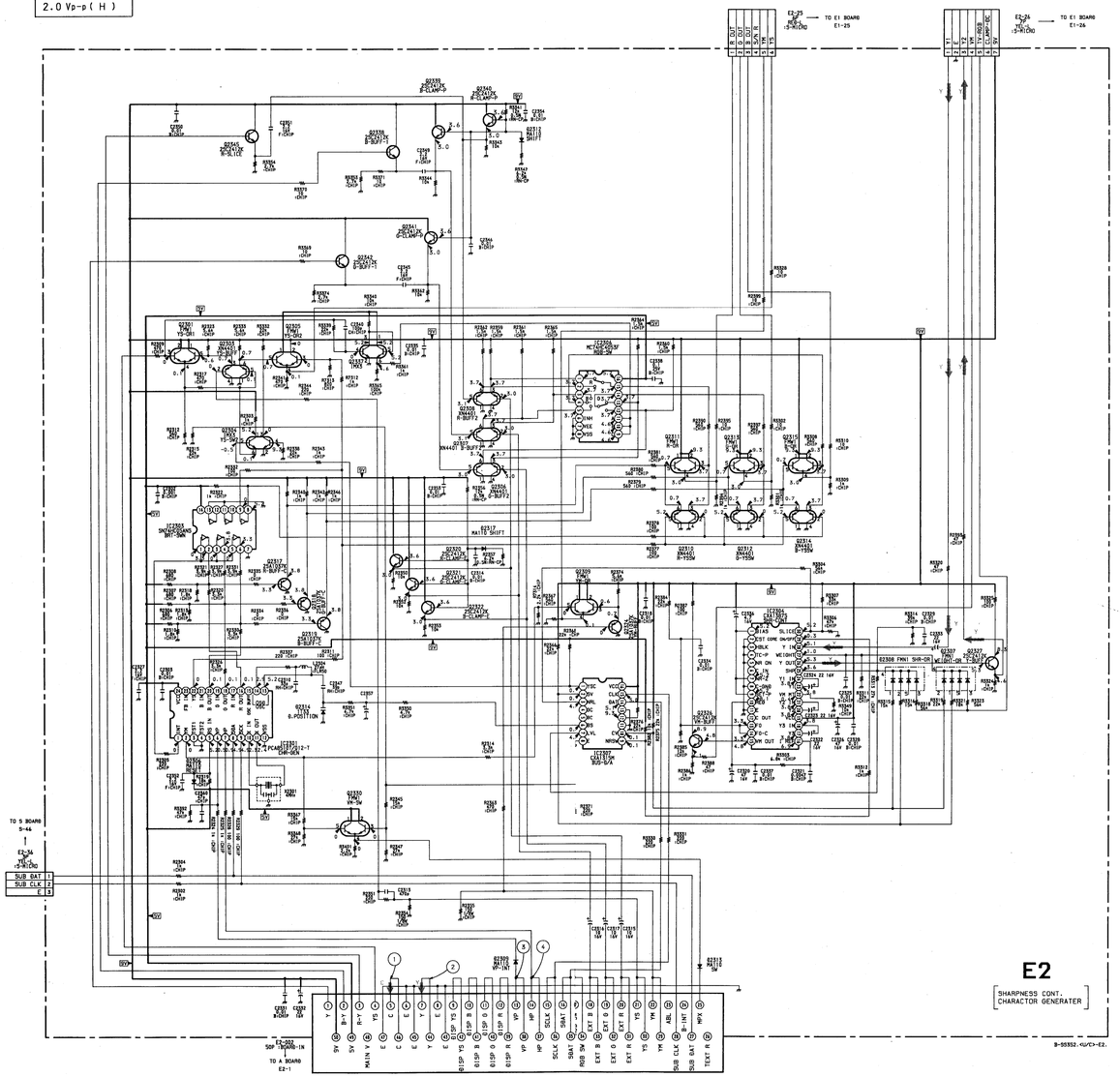
① 0.5 Vp-p (V)	② 0.3 Vp-p (V)	③ 1.5 Vp-p (H)
④ 0.8 Vp-p (H)	⑤ 0.8 Vp-p (H)	⑥ 22 Vp-p (H)
⑦ 1.6 Vp-p (V)	⑧ 2.0 Vp-p (H)	



• E2 BOARD WAVEFORMS

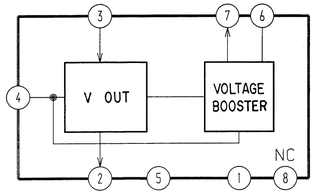
B-SS347.<U/C>-E2<WAVELIST>

① 0.8 Vp-p (H)	② 0.8 Vp-p (H)	③ 1.7 Vp-p (V)
④ 2.0 Vp-p (H)		



(5) SCHEMATIC DIAGRAM OF D BOARD

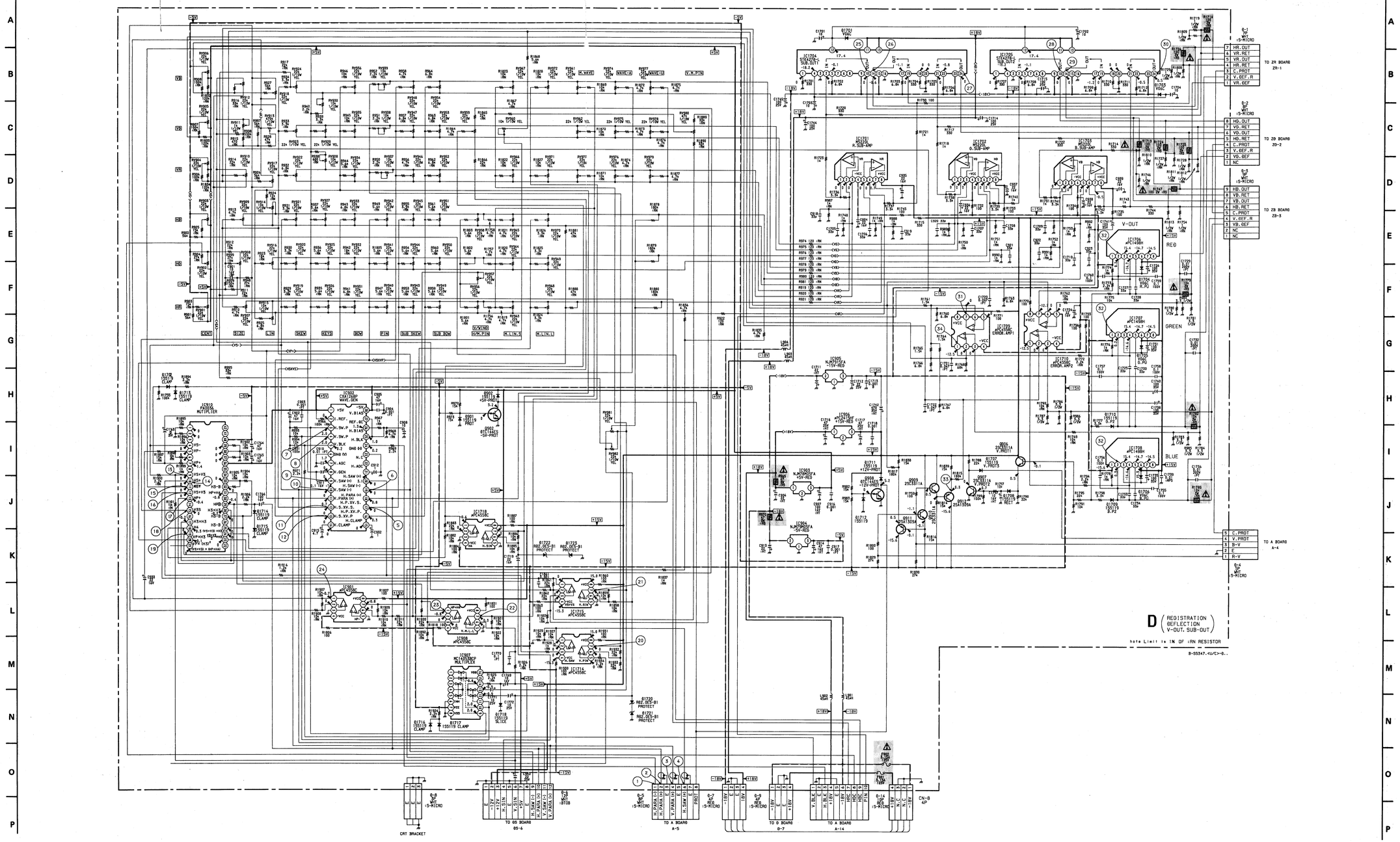
D Board IC1706, 1707, 1708 μPC1498H

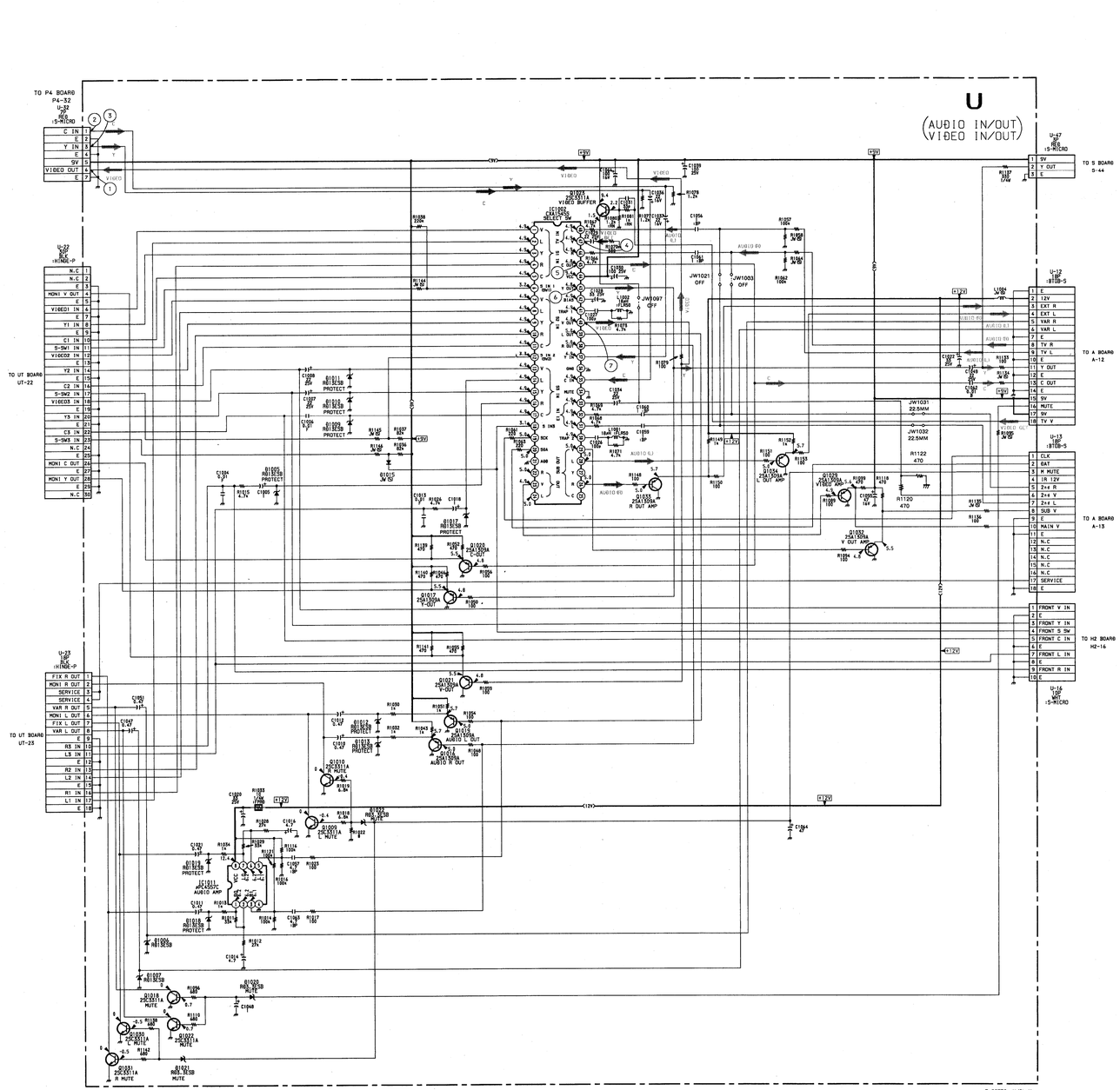


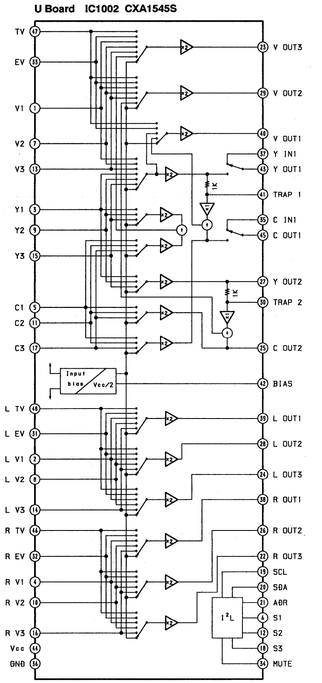
• D BOARD WAVEFORMS

B-55347.<U/C>-0 <WAVELIST> -1

① 2.6Vp-p (H)	② 2.7Vp-p (H)	③ 2.2Vp-p (V)
④ 4.4Vp-p (H)	⑤ 2.4 Vp-p (V)	⑥ 2.4Vp-p(H)
⑦ 4.2Vp-p (H)	⑧ 4.0Vp-p (V)	⑨ 2.3 Vp-p (V)
⑩ 2.3Vp-p (V)	⑪ 2.2Vp-p (V)	⑫ 2.6 Vp-p (V)
⑬ 1.8Vp-p (V)	⑭ 2.2Vp-p (H)	⑮ 1.3Vp-p (V)
⑯ 2.1Vp-p (V)	⑰ 2.3Vp-p (H)	⑱ 6.2Vp-p (V)
⑲ 2.7Vp-p (V)	⑳ 6.6Vp-p (V)	㉑ 2.8Vp-p (V)
㉒ 0.48Vp-p (V)	㉓ 2.4 Vp-p (H)	㉔ 2.2Vp-p (V)
㉕ 36.0Vp-p (V)	㉖ 32.0Vp-p (H)	㉗ 20.0Vp-p (V)
㉘ 26.0Vp-p (H)	㉙ 32.0Vp-p (V)	㉚ 24.0Vp-p (H)
㉛ 1.3Vp-p (V)	㉜ 68.0Vp-p (V)	㉝ 1.6Vp-p (H)
㉞ 2.2Vp-p (V)		



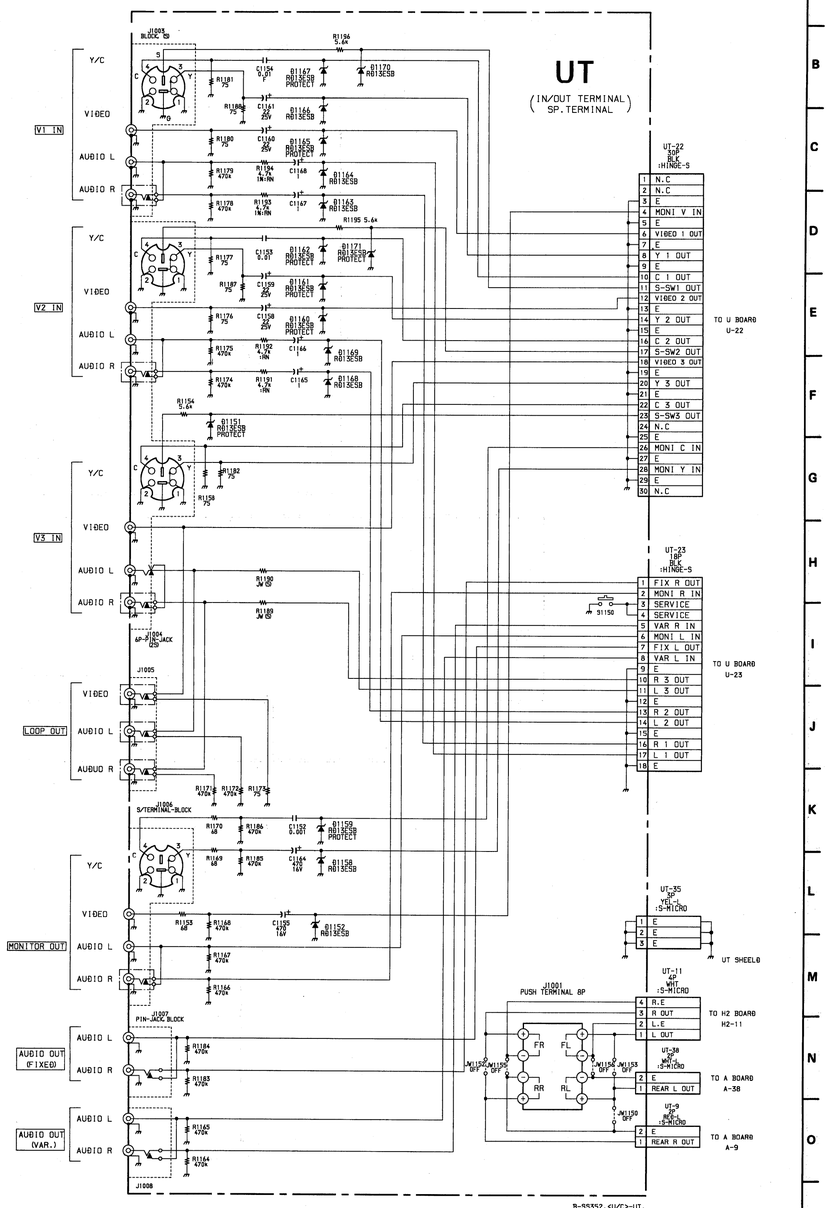


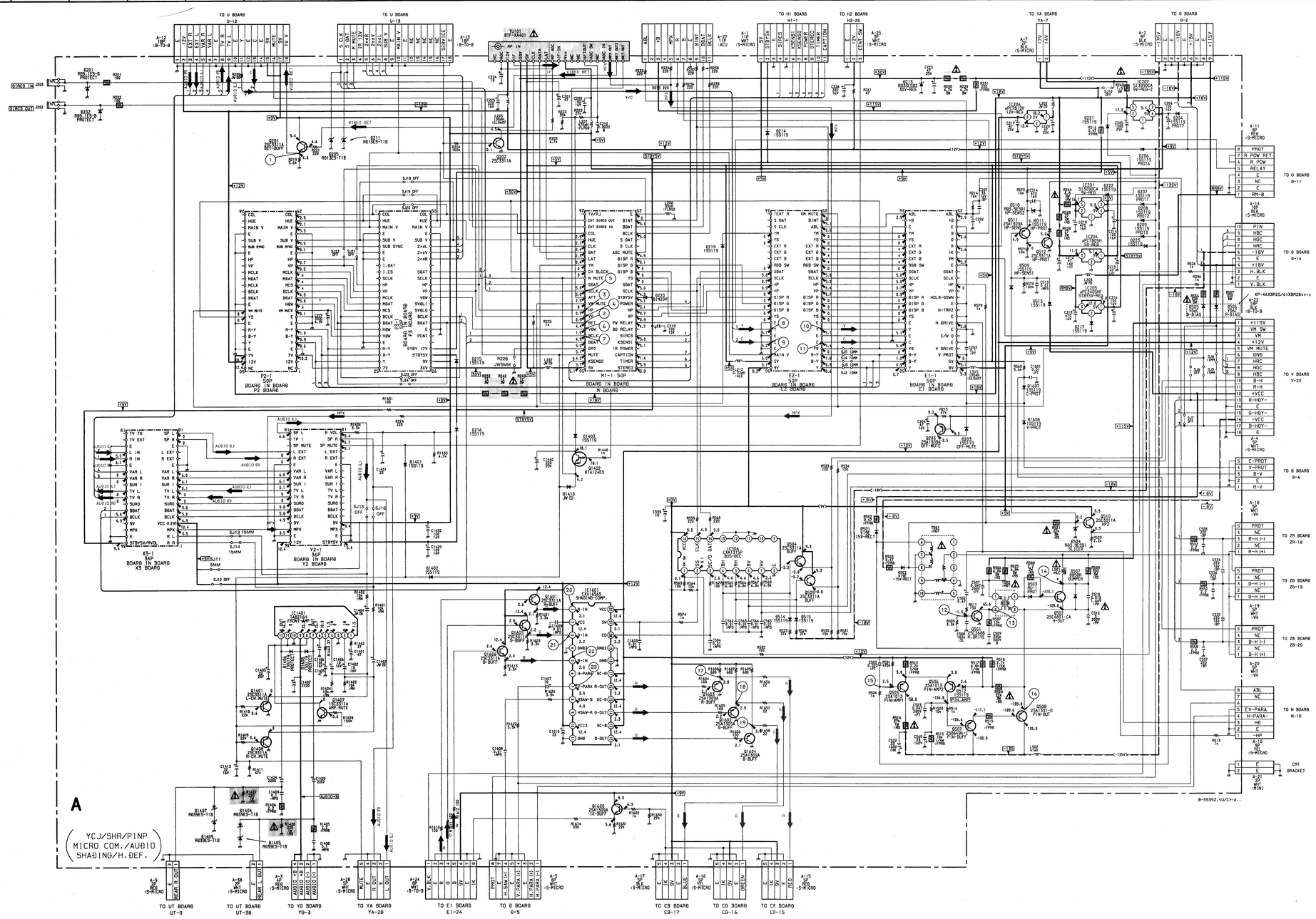


● **U BOARD WAVEFORMS**

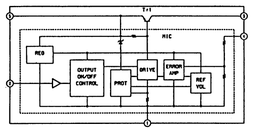
B-5S352.<U/C>-U <WAVELIST>

① 1.3Vp-p (H)	② 2.2Vp-p (H)	③ 2.2Vp-p (H)
④ 2.3Vp-p (H)	⑤ 2.1Vp-p (H)	⑥ 1.8 Vp-p (H)
⑦ 2.2Vp-p (H)		

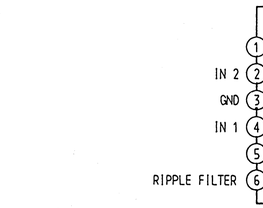




A Board IC201, 207 SI-3090CA



A Board IC401 TA8216H

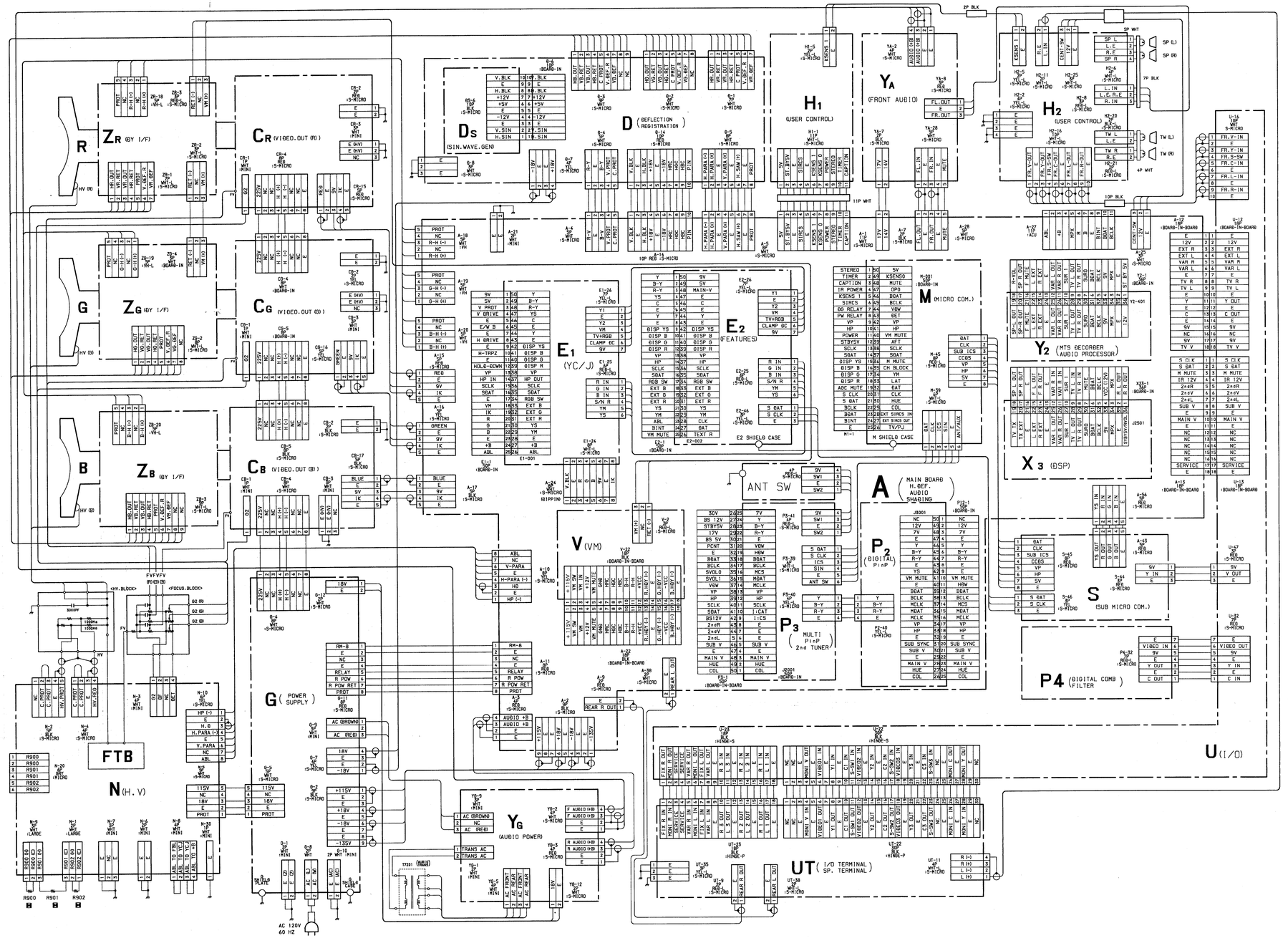


• A BOARD WAVEFORMS

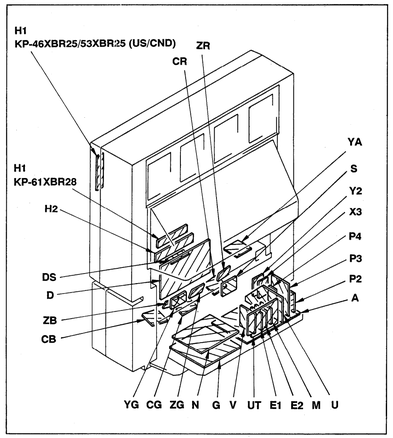
B-SS347.<U/C>-A <WAVELIST> -1

① 1.2Vp-p (H)	② 1.2Vp-p (H)	③ 2.5Vp-p (H)
④ 2.0Vp-p (V)	⑤ 2.0 Vp-p (V)	⑥ 2.0Vp-p(V)
⑦ 1.8Vp-p (V)	⑧ 1.0Vp-p (H)	⑨ 1.2 Vp-p (H)
⑩ 1.0Vp-p (H)	⑪ 0.8Vp-p (H)	⑫ 1.4 Vp-p (H)
⑬ 58 Vp-p (H)	⑭ 450Vp-p (H)	⑮ 0.7Vp-p (V)
⑯ 12.0Vp-p (V)	⑰ 1.5Vp-p (H)	⑱ 1.5Vp-p (H)
⑲ 1.4Vp-p (H)	⑳ 1.6Vp-p (H)	㉑ 1.6Vp-p (H)
㉒ 1.4Vp-p (H)	㉓ 1.5Vp-p (V)	

6-4. FRAME SCHEMATIC DIAGRAM



6-5. CIRCUIT BOARDS LOCATION



6-6. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms. kΩ =1000Ω , MΩ =1000kΩ
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power ¼ W
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-chassis.
- The components identified by ⚠ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪ , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⚠ and repeat the adjustment until the specified value is achieved. (Refer to R852, R852, R900, R901, and R902 adjustment on Page 60-63)
  When replacing the part in below table, be sure to perform the related adjustment.

Part replaced (◪)		Adjustment (⚠)
HV Block IC803, IC805, D805, D807, C817, C818, C821, C836, C837, R824, R825, R827, R828, R834, R835, R836, R864, R865, R866, R902	N Board	HV Regurater (R902)
HV Block IC803, IC804, Q804, D806, D808, C809, C819, C820, C822, C823, C850, R807, R826, R829, R832, R833, R837, R838, R839, R840, R841, R892, R893, R900, R901	N Board	HV Hold down (R900, R901)
Q618, Q621, D628, C634, R639, R649, R652, R655, R658	G Board	OVP (R652)
① IC802, C805, Q807, D811, D812, C810, C824, C825, C826, C827, C831, R810, R843, R844, R847, R848, R849, R850, R851, R852, R853, R854, R881 ② IC804, Q804, Q808, D808, D809, C809, C828, C829, C830, C831, R807, R839, R840, R841, R847, R848, R849, R850, R851, R852, R855, R856, R857, R881	N Board N Board	Beam current protecter ①R852 ②R852

Reference Information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a color-bar signal input.
- Readings are taken with a 10MΩ digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
  * : Can not be measured.
- Circled numbers are waveform references.
- : B+ bus.
- : B- bus.
- : signal path. (RF)

Note: The symbol ⇔ display is on the component side.

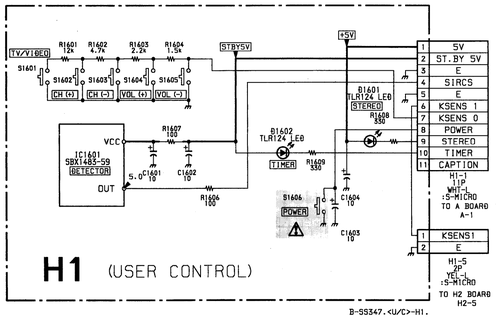
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

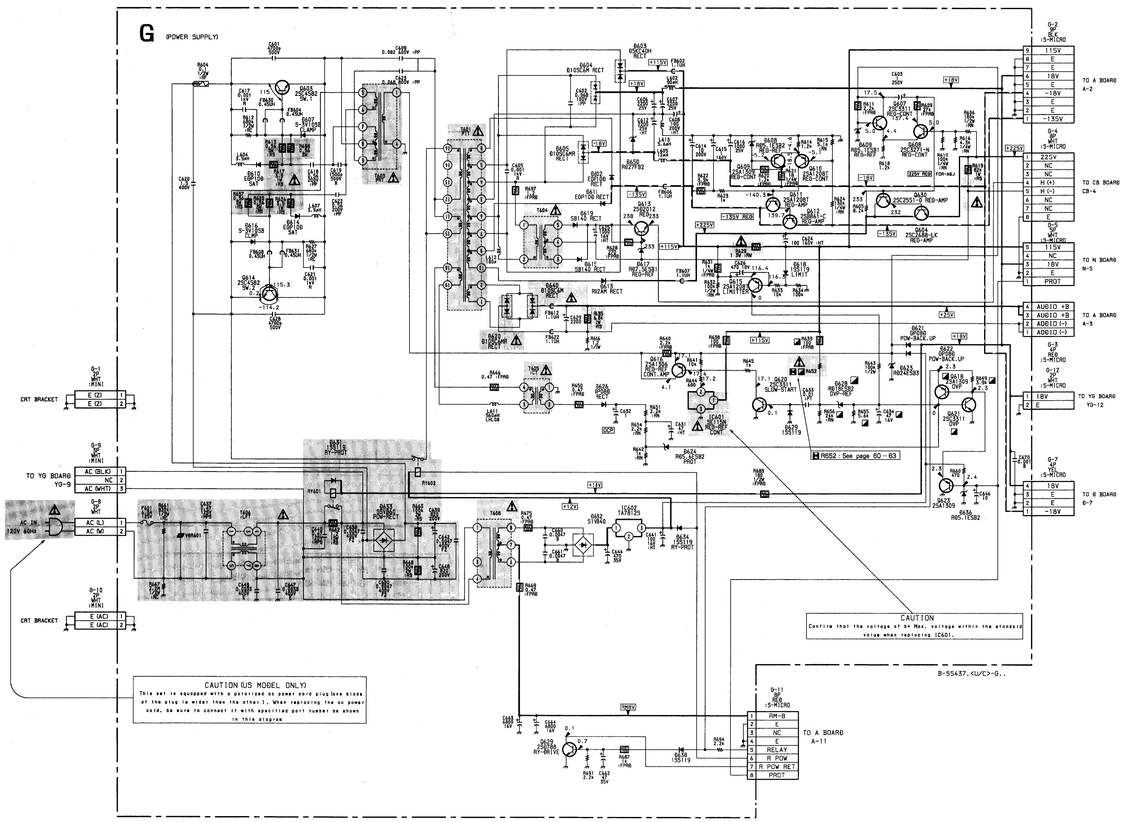
The symbol ⇔ indicate fast operating fuse. Replace only with fuse of same rating as marked.

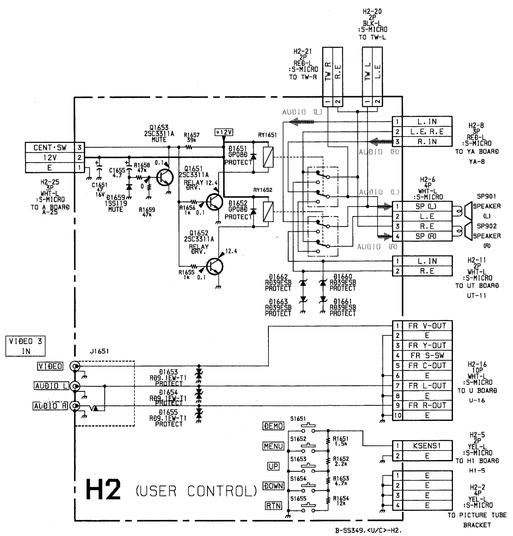
Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

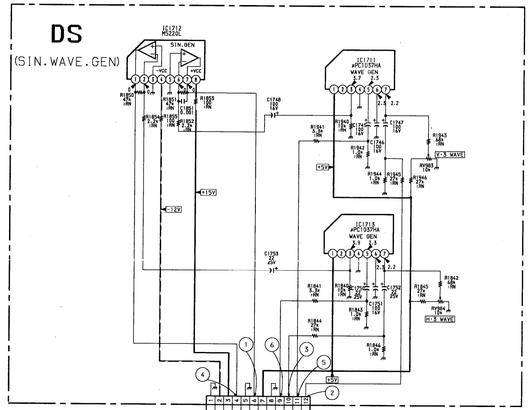
Le symbole ⇔ indique une fusible a action rapide. Doit etre remplacee par une fusible de meme valeur, comme maque.

(1) SCHEMATIC DIAGRAMS OF G, H1, H2 AND DS BOARDS




G
(POWER SUPPLY)
CRT BRACKET
TO YG BOARD YG-9
AC IN 120V 60Hz
CRT BRACKET
CAUTION (US MODEL ONLY)
This set is equipped with a polarized ac power cord plug(one blade of the plug is wider than the other). When replacing the ac power cord, be sure to connect it with specified part number as shown in this diagram.
TO A BOARD A-2
TO CB BOARD CB-4
TO N BOARD N-5
TO A BOARD A-3
TO YG BOARD YG-12
TO G BOARD G-7
TO A BOARD A-11
R652 : See page 60 - 63
CAUTION
Confirm that the voltage of pr Max. voltage within the standard value when replacing IC401.
B-55437.<U/C>-G.





- **DS BOARD WAVEFORMS**

B-55347.<U/C>-DS<WAVELIST>

① 12.5Vp-p(V)	② 2.4Vp-p (V)	③ 2.25Vp-p (H)
④ 2.3Vp-p (H)	⑤ 2.2 Vp-p (V)	⑥ 2.0Vp-p (H)